

MASSACHUSETTS INSTITUTE OF TECHNOLOGY



REPORTS ON THE AUDIT OF FEDERAL FINANCIAL ASSISTANCE PROGRAMS IN ACCORDANCE WITH OMB CIRCULAR A-133

FOR THE YEAR ENDED JUNE 30, 2015

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Reports on the Audit of Federal Financial Assistance Programs in Accordance with OMB Circular A-133 For the Year Ended June 30, 2015

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SECTION I

FINANCIAL REPORTS

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Independent Auditor's Report

To the Risk and Audit Committee of the
Massachusetts Institute of Technology

Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of Massachusetts Institute of Technology (the "Institute") and its subsidiaries, which comprise the consolidated statement of financial position as of June 30, 2015, and the related consolidated statements of activities and cash flows for the year then ended, and the related notes to the financial statements.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Massachusetts Institute of Technology and its subsidiaries as of June 30, 2015, and the changes in its net assets and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

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Other Matters

We have previously audited the Massachusetts Institute of Technology's 2014 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated September 12, 2014. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2014 is consistent, in all material respects, with the audited financial statements from which it has been derived.

Other Information

Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying schedule of expenditures of federal awards including appendices A, B and C for the year ended June 30, 2015 is presented for purposes of additional analysis as required by Office of Management and Budget Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations* and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated, in all material respects, in relation to the consolidated financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated September 11, 2015 on our consideration of Massachusetts Institute of Technology's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters for the year ended June 30, 2015. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Massachusetts Institute of Technology's internal control over financial reporting and compliance.

PricewaterhouseCoopers LLP

September 11, 2015

Massachusetts Institute of Technology

Statements of Financial Position

at June 30, 2015 and 2014

| <i>(in thousands of dollars)</i> | 2015 | 2014 |
|---|----------------------|----------------------|
| Assets | | |
| Cash | \$ 317,682 | \$ 297,759 |
| Accounts receivable, net | 172,522 | 195,544 |
| Pledges receivable, net, at fair value | 558,095 | 490,336 |
| Contracts in progress, principally US Government | 66,440 | 65,326 |
| Deferred charges, inventories, and other assets | 153,947 | 120,811 |
| Student notes receivable, net | 45,678 | 48,169 |
| Investments, at fair value | 17,533,764 | 16,228,756 |
| Noncontrolling interests | 232,415 | 287,825 |
| Land, buildings, and equipment (at cost of \$4,186,490 for June 2015; \$3,881,205 for June 2014), net of accumulated depreciation | 2,822,312 | 2,624,271 |
| Total assets | \$ 21,902,855 | \$ 20,358,797 |
| Liabilities and Net Assets | | |
| Liabilities: | | |
| Accounts payable, accruals, and other liabilities | 436,288 | 411,959 |
| Liabilities due under life income fund agreements, at fair value | 141,946 | 103,076 |
| Deferred revenue and other credits | 151,933 | 133,288 |
| Advance payments | 422,675 | 392,214 |
| Borrowings | 2,922,231 | 2,918,901 |
| Government advances for student loans | 35,561 | 35,037 |
| Accrued benefit liabilities | 53,233 | 48,830 |
| Total liabilities | 4,163,867 | 4,043,305 |
| Net Assets: | | |
| Unrestricted net assets controlled by the Institute | 7,071,258 | 6,467,131 |
| Unrestricted net assets attributable to noncontrolling interests | 232,415 | 287,825 |
| Total unrestricted net assets | 7,303,673 | 6,754,956 |
| Temporarily restricted | 7,553,447 | 6,718,225 |
| Permanently restricted | 2,881,868 | 2,842,311 |
| Total net assets | 17,738,988 | 16,315,492 |
| Total liabilities and net assets | \$ 21,902,855 | \$ 20,358,797 |

The accompanying notes are an integral part of the financial statements.

Massachusetts Institute of Technology

Statement of Activities

for the year ended June 30, 2015

(with summarized financial information for the year ended June 30, 2014)

| (in thousands of dollars) | 2015 | | | Total | |
|---|----------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|
| | Unrestricted | Temporarily Restricted | Permanently Restricted | 2015 | 2014 |
| Operating Activities | | | | | |
| Operating Revenues | | | | | |
| Tuition and similar revenues, net of discount of \$280,282 in 2015 and \$271,299 in 2014 .. | \$ 331,819 | \$ - | \$ - | \$ 331,819 | \$ 324,502 |
| Research revenues: | | | | | |
| Campus | 665,583 | - | - | 665,583 | 663,518 |
| Lincoln. | 879,327 | - | - | 879,327 | 828,659 |
| SMART | 31,737 | - | - | 31,737 | 31,617 |
| Total research revenues | <u>1,576,647</u> | <u>-</u> | <u>-</u> | <u>1,576,647</u> | <u>1,523,794</u> |
| Gifts and bequests for current use | 221,820 | - | - | 221,820 | 162,091 |
| Fees and services | 160,962 | - | - | 160,962 | 176,341 |
| Other programs | 101,293 | - | - | 101,293 | 122,582 |
| Support from investments: | | | | | |
| Endowment | 545,861 | - | - | 545,861 | 515,431 |
| Other investments | 125,498 | - | - | 125,498 | 109,925 |
| Total support from investments | <u>671,359</u> | <u>-</u> | <u>-</u> | <u>671,359</u> | <u>625,356</u> |
| Auxiliary enterprises | 120,946 | - | - | 120,946 | 120,101 |
| Net asset reclassifications and transfers | 105,923 | - | - | 105,923 | 69,556 |
| Total operating revenues | <u>\$ 3,290,769</u> | <u>\$ -</u> | <u>\$ -</u> | <u>\$ 3,290,769</u> | <u>\$ 3,124,323</u> |
| Operating Expenses | | | | | |
| Salaries and wages | \$ 1,253,353 | \$ - | \$ - | \$ 1,253,353 | \$ 1,183,270 |
| Employee benefits | 309,195 | - | - | 309,195 | 287,976 |
| Supplies and services | 971,239 | - | - | 971,239 | 892,493 |
| Subrecipient agreements | 140,417 | - | - | 140,417 | 124,074 |
| Utilities, rent, and repairs | 171,744 | - | - | 171,744 | 182,271 |
| Depreciation | 146,239 | - | - | 146,239 | 137,638 |
| Interest expense | 118,932 | - | - | 118,932 | 110,795 |
| Total operating expenses | <u>3,111,119</u> | <u>-</u> | <u>-</u> | <u>3,111,119</u> | <u>2,918,517</u> |
| Results of operations | <u>\$ 179,650</u> | <u>\$ -</u> | <u>\$ -</u> | <u>\$ 179,650</u> | <u>\$ 205,806</u> |
| Non-Operating Activities | | | | | |
| Pledge revenue | \$ - | \$ 132,249 | \$ 62,956 | \$ 195,205 | \$ 180,119 |
| Gifts and bequests | - | - | 76,665 | 76,665 | 110,445 |
| Investment income | - | 1,480 | 2,905 | 4,385 | 9,098 |
| Net gain on investments and other assets. | 720,195 | 1,032,292 | (100,887) | 1,651,600 | 2,152,933 |
| Distribution of accumulated investment gains | (192,145) | (324,648) | - | (516,793) | (497,888) |
| Net change in life income funds | (726) | (5,287) | (13,184) | (19,197) | 24,101 |
| Postretirement plan changes other than net periodic benefit cost | 13,314 | - | - | 13,314 | 54,398 |
| Net asset reclassifications and transfers | <u>(116,161)</u> | <u>(864)</u> | <u>11,102</u> | <u>(105,923)</u> | <u>(69,556)</u> |
| Total non-operating activities | <u>424,477</u> | <u>835,222</u> | <u>39,557</u> | <u>1,299,256</u> | <u>1,963,650</u> |
| Increase in net assets controlled by the Institute | 604,127 | 835,222 | 39,557 | 1,478,906 | 2,169,456 |
| Change in net assets attributable to noncontrolling interests | (55,410) | - | - | (55,410) | 13,162 |
| Net assets at the beginning of the year | <u>6,754,956</u> | <u>6,718,225</u> | <u>2,842,311</u> | <u>16,315,492</u> | <u>14,132,874</u> |
| Net assets at the end of the year | <u>\$ 7,303,673</u> | <u>\$ 7,553,447</u> | <u>\$ 2,881,868</u> | <u>\$ 17,738,988</u> | <u>\$ 16,315,492</u> |

The accompanying notes are an integral part of the financial statements.

Massachusetts Institute of Technology

Statements of Cash Flows

for the years ended June 30, 2015 and 2014

| <i>(in thousands of dollars)</i> | 2015 | 2014 |
|--|--------------------------|--------------------------|
| Cash Flow from Operating Activities | | |
| Increase in net assets | \$ 1,423,496 | \$ 2,182,618 |
| Adjustments to reconcile change in net assets to net cash used in operating activities: | | |
| Net gain on investments and other assets | (1,651,600) | (2,152,933) |
| Change in accrued benefits liabilities | 4,403 | (60,814) |
| Depreciation | 146,239 | 137,638 |
| Donated securities received. | (47,153) | (42,890) |
| Proceeds from sale of donated securities | 34,226 | 18,894 |
| Net gain on life income funds | (9,844) | (32,275) |
| Change in noncontrolling interests. | 55,410 | (13,162) |
| Amortization of bond premiums and discounts and other adjustments | (2,101) | (4,383) |
| Change in operating assets and liabilities: | | |
| Pledges receivable | (67,759) | (85,742) |
| Accounts receivable | 23,022 | (26,612) |
| Contracts in progress | (1,114) | 2,673 |
| Deferred charges, inventories, and other assets | (9,459) | (12,920) |
| Accounts payable, accruals, and other liabilities, excluding building and equipment accruals | 10,981 | 25,365 |
| Liabilities due under life income fund agreements | 38,870 | 7,817 |
| Deferred revenue and other credits. | 18,645 | (4,729) |
| Advance payments | 30,461 | (4,617) |
| Reclassify investment income | (4,385) | (9,098) |
| Reclassify contributions restricted for long-term investment | (63,738) | (86,449) |
| Net cash used in operating activities | <u>(71,400)</u> | <u>(161,619)</u> |
| Cash Flow from Investing Activities | | |
| Purchase of land, buildings, and equipment | (332,275) | (243,118) |
| Purchases of investments | (23,018,625) | (34,457,642) |
| Proceeds from sale of investments | 23,409,764 | 34,244,206 |
| Student notes issued | (19,024) | (26,599) |
| Collections from student notes | 21,224 | 27,801 |
| Net cash provided by (used in) investing activities. | <u>61,064</u> | <u>(455,352)</u> |
| Cash Flow from Financing Activities | | |
| Contributions restricted for investment in endowment | 63,738 | 86,449 |
| Proceeds from sale of donated securities restricted for endowment | 12,928 | 23,996 |
| Increase in investment income for restricted purposes | 4,385 | 9,098 |
| Proceeds from borrowings | 518,500 | 550,000 |
| Repayment of borrowings | (569,816) | (55,200) |
| Increase in government advances for student loans | 524 | 474 |
| Net cash provided by financing activities. | <u>30,259</u> | <u>614,817</u> |
| Net increase (decrease) in cash. | 19,923 | (2,154) |
| Cash at the beginning of the year | 297,759 | 299,913 |
| Cash at the end of the year | <u>\$ 317,682</u> | <u>\$ 297,759</u> |

The accompanying notes are an integral part of the financial statements.

Notes to Financial Statements

A. Accounting Policies

Basis of Presentation

The accompanying financial statements have been prepared in accordance with generally accepted accounting principles (GAAP) in the United States of America. The financial statements include MIT and its wholly owned subsidiaries.

Net assets, revenues, expenses, gains and losses are classified into three categories based on the existence or absence of donor-imposed restrictions. The categories are permanently restricted, temporarily restricted, and unrestricted net assets. Unconditional promises to give (pledges) are recorded as receivables and revenues within the appropriate net asset category.

Permanently restricted net assets include gifts, pledges, trusts and remainder interests, and income and gains that are required by donors to be permanently retained. Pledges, trusts, and remainder interests are reported at their estimated fair values.

Temporarily restricted net assets include gifts, pledges, trusts and remainder interests, and income and gains that can be expended but for which restrictions have not yet been met. Such restrictions include purpose restrictions where donors have specified the purpose for which the net assets are to be spent, or time restrictions imposed by donors or implied by the nature of the gift (capital projects, pledges to be paid in the future, life income funds), or by interpretations of law (net gains on permanently restricted gifts that have not been appropriated for spending). Gifts specified for the acquisition or construction of long-lived assets are reported as temporarily restricted net assets until the monies are expended and the buildings are put into use, at which point they are reclassified to unrestricted net assets. Net unrealized losses on permanently restricted endowment funds for which the book value exceeds market value are recorded as a reduction to unrestricted net assets.

Unrestricted net assets are all the remaining net assets of MIT. Donor-restricted gifts and unexpended restricted endowment income that are received and either spent, or the restriction is otherwise met within the same year, are reported as unrestricted revenue. Gifts of long-lived assets are reported as unrestricted revenue.

Net asset reclassifications and transfers consist primarily of payments on unrestricted pledges and use of building funds in accordance with donor restrictions for buildings put into use during the year. Expirations of temporary restrictions on net assets, release of permanent restrictions by a donor, and change of restrictions imposed by donors are also reported as reclassifications of net assets among unrestricted, temporarily and permanently restricted net assets.

MIT administers its various funds, including endowments, funds functioning as endowments, school or departmental funds, and related accumulated gains in accordance with the

principles of "Fund Accounting." Gifts are recorded in fund accounts and investment income is distributed to funds annually. Income distributed to funds may be a combination of capital appreciation and yield pursuant to MIT's total return investment and spending policies. Each year, the Executive Committee of the Corporation approves the rates of distribution of investment return to the funds from MIT's investment pools. (See Note K for further information on income distributed to funds.)

MIT's operations include tuition, research revenues, unrestricted gifts and bequests for current use, fees and services, other programs, endowment distribution and income from other investments, auxiliary revenues, payments on pledges for unrestricted gifts, and operating expenditures. Results of operations are displayed in the Statement of Activities.

Tax Status

MIT is a nonprofit organization that is tax-exempt under Section 501(c)(3) of the Internal Revenue Code, originally recognized in October 1926, with the most recent affirmation letter dated July 2001.

US GAAP requires MIT to evaluate tax positions taken by the Institute and recognize a tax liability (or asset) if the Institute has taken an uncertain position that more likely than not would not be sustained upon examination by the IRS. MIT has analyzed the tax positions taken and has concluded that as of June 30, 2015, there are no significant uncertain positions taken or expected to be taken that would require recognition of a liability (or asset) or disclosure in the financial statements.

Cash

Certain cash balances, totaling \$116.4 million and \$55.8 million at June 30, 2015 and 2014, respectively, are restricted for use under certain sponsored research agreements or are held on behalf of a related party.

The Institute had approximately \$316.1 million and \$296.0 million at June 30, 2015 and 2014, respectively, of its cash accounts with a single institution. The Institute has not experienced any losses associated with deposits at this institution.

Advance Payments

Amounts received by MIT from the US Government, corporations, industrial sources, foundations, and other non-MIT sponsors under the terms of agreements that generally require the exchange of assets, rights, or privileges between MIT and the sponsor are recorded as advance payments. Revenue is recognized as MIT fulfills the terms of the agreements.

A. Accounting Policies (continued)

Land, Buildings, and Equipment

Land, buildings, and equipment are shown at cost when purchased or fair value as of the date of a gift when received as gifts, net of accumulated depreciation. When expended, costs associated with the construction of new facilities are shown as construction in progress until such projects are completed and put into use. Depreciation is computed on a straight-line basis over the estimated useful lives of 25 to 50 years for buildings, 3 to 25 years for equipment, and 4 to 6 years for software.

Fully depreciated assets were removed from the financial statements in the amount of \$34.3 million and \$33.6 million during 2015 and 2014, respectively. Land, buildings, and equipment at June 30, 2015 and 2014 are shown in Table 1.

| <i>(in thousands of dollars)</i> | 2015 | 2014 |
|---|---------------------|---------------------|
| Land | \$ 78,528 | \$ 67,538 |
| Land improvements | 64,525 | 64,733 |
| Educational buildings | 3,382,438 | 3,281,247 |
| Equipment | 271,326 | 246,026 |
| Software | 44,711 | 40,803 |
| Total | 3,841,528 | 3,700,347 |
| Less: accumulated depreciation | (1,364,178) | (1,256,934) |
| Construction in progress | 337,018 | 167,726 |
| Software projects in progress | 7,944 | 13,132 |
| Net land, buildings, and equipment | \$ 2,822,312 | \$ 2,624,271 |

Depreciation expense was \$146.2 million in 2015 and \$137.6 million in 2014. Net interest expense of \$6.6 million and \$4.4 million was capitalized during 2015 and 2014, respectively, in connection with MIT's construction projects.

Tuition and Student Support

Tuition and similar revenues, shown in Table 2 below, includes tuition and fees in degree programs as well as tuition and fees for executive and continuing education programs at MIT.

| <i>(in thousands of dollars)</i> | 2015 | 2014 |
|---|-------------------|-------------------|
| Undergraduate and graduate programs | \$ 569,982 | \$ 553,344 |
| Executive and continuing education programs | 42,119 | 42,457 |
| Total | 612,101 | 595,801 |
| Less: tuition discount | (280,282) | (271,299) |
| Net tuition and similar revenues | \$ 331,819 | \$ 324,502 |

Tuition support is awarded to undergraduate students by MIT based on need. Graduate students are provided with tuition support in connection with research assistance, teaching assistance, and fellowship appointments. Tuition support from MIT sources is displayed as tuition discount. Total student support granted to students was \$498.5 million and \$481.8 million in 2015 and 2014, respectively. Of that amount, \$161.4 million in 2015 and \$157.6 million in 2014 was aid from sponsors. Components of student support are detailed in Table 3 below.

| <i>(in thousands of dollars)</i> | 2015 | | | 2014 | | |
|---|-------------------|-------------------|-----------------------|-------------------|-------------------|-----------------------|
| | Institute Sources | External Sponsors | Total Student Support | Institute Sources | External Sponsors | Total Student Support |
| Undergraduate tuition support | \$ 92,488 | \$ 14,660 | \$ 107,148 | \$ 88,570 | \$ 14,506 | \$ 103,076 |
| Graduate tuition support | 187,794 | 59,567 | 247,361 | 182,729 | 57,293 | 240,022 |
| Fellow stipends | 21,469 | 17,290 | 38,759 | 20,934 | 17,858 | 38,792 |
| Student employment | 35,417 | 69,844 | 105,261 | 31,935 | 67,955 | 99,890 |
| Total | \$ 337,168 | \$ 161,361 | \$ 498,529 | \$ 324,168 | \$ 157,612 | \$ 481,780 |

A. Accounting Policies (continued)

Sponsored Research

Direct and indirect categories of research revenues are shown in the table 4 below.

| <i>(in thousands of dollars)</i> | 2015 | 2014 |
|--|---------------------|---------------------|
| Direct: | | |
| Campus | \$ 482,563 | \$ 475,382 |
| Lincoln. | 844,588 | 791,292 |
| SMART | 31,620 | 31,519 |
| Total direct. | 1,358,771 | 1,298,193 |
| Indirect: | | |
| Campus | \$ 183,020 | \$ 188,136 |
| Lincoln. | 34,739 | 37,367 |
| SMART | 117 | 98 |
| Total indirect | 217,876 | 225,601 |
| Total research revenues | \$ 1,576,647 | \$ 1,523,794 |

Revenue associated with contracts and grants is recognized as related costs are incurred. The capital costs of buildings and equipment are depreciated over their estimated life cycle, and the sponsored research recovery allowance for depreciation is treated as indirect research revenue. MIT has recorded reimbursement of indirect costs relating to sponsored research at negotiated fixed billing rates. The revenue generated by the negotiated rates is adjusted each fiscal year to reflect any variance between the negotiated fixed rates and rates based on actual cost. The actual cost rate is audited by the Defense Contract Audit Agency (DCAA) and a final fixed-rate agreement is signed by the US Government and MIT. The variance between the negotiated fixed rate and the final audited rate results in a carryforward (over- or under-recovery). The carryforward is included in the calculation of negotiated fixed billing rates in future years. Any adjustment in the rate is charged or credited to unrestricted net assets.

Gifts and Pledges

Gifts and pledges are recognized when received. Gifts of securities are recorded at their fair value at the date of contribution. Donated securities received totaled \$47.2 million and \$42.9 million in 2015 and 2014, respectively, and are shown separately in the Statements of Cash Flows. Gifts of equipment received from manufacturers and other donors are put into use and recorded by MIT at fair value. Gifts of equipment totaled \$0.3 million in 2015 and \$1.3 million in 2014. Pledges in the amount of \$558.1 million and \$490.3 million were recorded as receivables at June 30, 2015 and 2014, respectively, with the revenue assigned to the appropriate classification of restriction. Pledges consist of unconditional written promises to contribute to MIT in the future and are recorded after discounting the future cash flows to the present value.

MIT records items of collections as gifts at nominal value. They are received for educational purposes and most are displayed throughout MIT. In general, collections are not disposed of for financial gain or otherwise encumbered in any manner.

Life Income Funds

MIT's life income fund agreements with donors consist primarily of irrevocable charitable gift annuities, pooled income funds, and charitable remainder trusts for which MIT serves as trustee. Assets are invested and payments are made to donors and other beneficiaries in accordance with the respective agreements. MIT records the assets that are associated with each life income fund at fair value and records as liabilities the present value of the estimated future payments at current interest rates to be made to the donors and beneficiaries under these agreements. A rollforward of liabilities due under life income fund agreements is presented in Table 5.

| <i>(in thousands of dollars)</i> | 2015 | 2014 |
|---|-------------------|-------------------|
| Balance at the beginning of the year | \$ 103,076 | \$ 95,259 |
| Addition for new gifts | 14,612 | 5,353 |
| Termination and payments to beneficiaries | (14,984) | (14,917) |
| Net investment and actuarial gain | 39,242 | 17,381 |
| Balance at end of the year | \$ 141,946 | \$ 103,076 |

Recently Adopted Accounting Standards

On July 1, 2014, MIT early adopted new guidance about *Fair Value Measurement and Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)*. This guidance requires MIT to show investments that use net asset value (NAV) as a practical expedient for valuation purposes, separately from other investments categorized in the fair value hierarchy described in Footnote B. This disclosure change, which was applied retrospectively, can be seen in the investment leveling tables shown in Footnotes B and J for both fiscal years 2015 and 2014.

On July 1, 2013, MIT adopted new guidance enhancing the disclosures about *Offsetting Assets and Liabilities*. This guidance requires MIT to disclose both gross and net information about instruments and transactions eligible for offset in the statement of assets and liabilities as well as instruments and transactions subject to an agreement similar to a master netting arrangement. It also requires disclosure of collateral received and posted in connection with master netting agreements or similar arrangements. Management has evaluated the impact of the enhanced guidance on the Institute's financial statements and has added the required additional disclosures in Note C.

A. Accounting Policies (continued)

Noncontrolling Interests

MIT is the general partner for several private equity funds and has displayed the noncontrolling interests on the Statements of Financial Position.

Non-Cash Items

Non-cash transactions excluded from the Statements of Cash Flows include \$13.3 million and \$14.6 million of accrued liabilities related to plant and equipment purchases for 2015 and 2014, respectively.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Reclassifications

Certain June 30, 2014 balances and amounts previously reported have been reclassified to conform to the June 30, 2015 presentation.

Subsequent Events

MIT has evaluated subsequent events through September 11, 2015, the date the financial statements were issued. There were no subsequent events that occurred after the balance sheet date that have a material impact on MIT's financial statements.

Summarized Information

The Statement of Activities includes certain prior year summarized comparative information in total but not by net asset class. Such information does not include sufficient detail to constitute a presentation in conformity with generally accepted accounting principles. Accordingly, such information should be read in conjunction with MIT's financial statements for the year ended June 30, 2014, from which summarized information was derived.

B. Investments

Investment transactions are accounted for on the trade date. Dividend income is recorded on the ex-dividend date. Realized gains and losses are recorded by MIT using the average cost basis. For limited partnerships, the realized gain/loss is calculated once the entire cost basis is distributed back to MIT or using information provided by managers with respect to the character of a distribution as being a gain or return of capital.

MIT values its investments in accordance with the principles of accounting standards which establish a hierarchy of valuation inputs based on the extent to which the inputs are observable in the marketplace. Observable inputs reflect market data obtained from sources independent of the reporting entity. Unobservable inputs reflect the entity's own assumptions about how market participants would value an asset or liability based on the best information available. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. MIT follows a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last is unobservable.

The following describes the hierarchy of inputs used to measure fair value and the primary valuation methodologies used by MIT for financial instruments measured at fair value on a recurring basis. The three levels of inputs are as follows:

- Level 1 – Quoted prices in active markets for identical assets or liabilities. Market price data is generally obtained from relevant exchanges or dealer markets.
- Level 2 – Inputs other than Level 1 that are observable, either

directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the same term of the assets or liabilities. Inputs are obtained from various sources including market participants, dealers, and brokers.

- Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Market information is considered when determining the proper categorization of the investment's fair value measurement within the fair valuation hierarchy.

Table 6 presents MIT's investments at fair value as of June 30, 2015 and 2014, grouped by the valuation hierarchy as defined earlier in this note. Investments that use NAV as a practical expedient for valuation purposes are shown separately.

Transfers between levels are recognized at the beginning of the reporting period. The 2015 transfers from Level 1 to Level 3 totaled \$0.1 million and transfers from Level 1 to Level 2 totaled \$9.6 million. There were no level transfers in 2014.

Cash and cash equivalents include cash, money market funds, repurchase agreements and negotiable certificates of deposit and are valued at cost, which approximates fair value. Instruments listed or traded on a securities exchange are valued at the last quoted price on the primary exchange where the security is traded.

B. Investments (continued)

Investments in non-exchange traded debt are primarily valued using independent pricing sources that use broker quotes or models using market observable inputs. Investments managed by external advisors include investments in absolute return, domestic, foreign and private equity, real estate and real asset commingled funds. The fair value of securities held in external investment funds that do not have readily determinable fair values are determined by the external managers based on appraisals or other estimates that require varying degrees of judgment, taking into consideration, among other things, the cost of the securities, prices of recent significant placements of securities of the same issuer, and subsequent developments concerning the companies to which the securities relate. Using these valuations, most of these external managers calculate MIT's capital account or NAV in accordance with, or in a manner consistent with, GAAP.

As a practical expedient, MIT is permitted under GAAP to estimate the fair value of its investments with external managers using the external managers' reported NAV without further adjustment unless MIT expects to sell the investment at a value other than NAV or the NAV is not calculated in accordance with GAAP.

Level 3 investments are valued by MIT based upon valuation information received from the relevant entity which may include last trade information, third-party appraisals of real estate, or valuations prepared in connection with the administration of an employee stock ownership plan. MIT may also utilize industry standard valuation techniques, including discounted cash flow models. The significant unobservable inputs used in the fair value measurements of MIT's direct investments may include their cost of capital, and equity and industry risk premiums. Significant increases or decreases in these inputs in isolation may result in a significantly lower or higher fair value measurement, respectively. Split-interest agreements are generally valued at the present value of the future distributions expected to be received over the term of the agreement.

Over-the-counter positions such as interest rate and total return swaps, credit default swaps, options, exchange agreements, and interest rate cap and floor agreements are valued using broker quotes or models using market observable inputs. Because the swaps and other over-the-counter derivative instruments have inputs that can usually be corroborated by observable market data, they are generally classified within Level 2.

B. Investments (continued)

Table 6. Investments

| <i>(in thousands of dollars)</i> | Quoted Prices in Active Markets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Unobservable Inputs (Level 3) | NAV as Practical Expedient (NAV) | Total Fair Value |
|--|---|---|---|--|----------------------|
| Fiscal Year 2015 | | | | | |
| Cash and cash equivalents | \$ 2,028,407 | \$ - | \$ - | \$ - | \$ 2,028,407 |
| US Treasury | 795,335 | - | - | - | 795,335 |
| US Government agency | - | 70,493 | - | - | 70,493 |
| Domestic bonds | 11,917 | 84,072 | 101,763 | - | 197,752 |
| Foreign bonds | 21 | 24,582 | - | - | 24,603 |
| Common equity: | | | | | |
| Long domestic | 243,677 | - | 67,096 | - | 310,773 |
| Long foreign | 567,394 | 4,159 | - | - | 571,553 |
| Short foreign | (6) | - | - | - | (6) |
| Equity:** | | | | | |
| Absolute return | - | - | - | 1,734,169 | 1,734,169 |
| Domestic | - | - | - | 1,880,487 | 1,880,487 |
| Foreign | - | - | - | 3,504,707 | 3,504,707 |
| Private | - | - | - | 3,132,869 | 3,132,869 |
| Real estate* | 19 | 6,282 | 1,985,878 | 785,536 | 2,777,715 |
| Real assets** | - | - | 1,260 | 605,612 | 606,872 |
| Split-interest agreements | - | - | 146,405 | - | 146,405 |
| Other | 3,985 | - | 3,956 | - | 7,941 |
| Derivatives | 47 | (35,967) | - | - | (35,920) |
| Total investments, gross | \$ 3,650,796 | \$ 153,621 | \$ 2,306,358 | \$ 11,643,380 | \$ 17,754,155 |
| Liabilities associated with investments: | | | | | |
| Real estate*** | - | - | (220,391) | - | (220,391) |
| Total investments, net | \$ 3,650,796 | \$ 153,621 | \$ 2,085,967 | \$ 11,643,380 | \$ 17,533,764 |
| Fiscal Year 2014 | | | | | |
| Cash and cash equivalents | \$ 2,691,413 | \$ - | \$ - | \$ - | \$ 2,691,413 |
| US Treasury | 779,831 | - | - | - | 779,831 |
| US Government agency | 15 | 74,312 | - | - | 74,327 |
| Domestic bonds | 15,624 | 91,704 | 97,254 | - | 204,582 |
| Foreign bonds | 20 | 22,545 | - | - | 22,565 |
| Common equity: | | | | | |
| Long domestic | 184,018 | 1 | 178,921 | - | 362,940 |
| Long foreign | 422,562 | 6,498 | - | - | 429,060 |
| Short foreign | (5) | - | - | - | (5) |
| Equity:** | | | | | |
| Absolute return | - | - | - | 1,643,868 | 1,643,868 |
| Domestic | - | - | - | 1,438,048 | 1,438,048 |
| Foreign | 71 | - | - | 2,532,278 | 2,532,349 |
| Private | - | - | - | 2,783,585 | 2,783,585 |
| Real estate* | 9,770 | - | 1,773,267 | 860,862 | 2,643,899 |
| Real assets** | - | - | 10,464 | 704,042 | 714,506 |
| Split-interest agreements | - | - | 147,182 | - | 147,182 |
| Other | 8,713 | - | 9,721 | - | 18,434 |
| Derivatives | 82 | (26,722) | - | - | (26,640) |
| Total investments, gross | \$ 4,112,114 | \$ 168,338 | \$ 2,216,809 | \$ 9,962,683 | \$ 16,459,944 |
| Liabilities associated with investments: | | | | | |
| Real estate*** | - | - | (231,188) | - | (231,188) |
| Total investments, net | \$ 4,112,114 | \$ 168,338 | \$ 1,985,621 | \$ 9,962,683 | \$ 16,228,756 |

* Real estate includes direct investments and investments held through commingled vehicles.

** Real assets and equity categories include commingled vehicles that invest in these types of investments.

*** Interest rates are 3.75% to 4.54%. Maturities are in calendar years 2023 and 2030. Principal payments range from \$5.4 million in fiscal year 2016 to \$40.9 million in fiscal year 2030.

B. Investments (continued)

Table 7 is a rollforward of the investments classified by MIT within Level 3 of the fair value hierarchy defined earlier in this footnote at June 30, 2015 and 2014.

| <i>(in thousands of dollars)</i> | Fair Value Beginning | Realized Gains (Losses) | Unrealized Gains (Losses) | Purchases | Sales | Transfers | Fair Value Ending |
|-----------------------------------|-------------------------|----------------------------|------------------------------|-------------------|---------------------|---------------|----------------------|
| Fiscal Year 2015 | | | | | | | |
| Domestic bonds | \$ 97,254 | \$ - | \$ - | \$ 13,276 | \$ (8,767) | \$ - | \$ 101,763 |
| Common equity: | | | | | | | |
| Long domestic | 178,921 | 402 | (104,853) | 600 | (7,989) | 15 | 67,096 |
| Short domestic | - | - | - | - | - | - | - |
| Equity: | | | | | | | |
| Private | - | - | - | - | - | - | - |
| Real estate | 1,773,267 | 76,933 | 289,303 | 193,540 | (347,265) | 100 | 1,985,878 |
| Real assets | 10,464 | - | (9,204) | - | - | - | 1,260 |
| Split-interest agreements | 147,182 | 3,902 | 3,396 | 1,298 | (9,373) | - | 146,405 |
| Other | 9,721 | (183) | 78 | 3 | (5,663) | - | 3,956 |
| Total, gross | \$ 2,216,809 | \$ 81,054 | \$ 178,720 | \$ 208,717 | \$ (379,057) | \$ 115 | \$ 2,306,358 |
| Real estate liabilities | (231,188) | - | - | (75,000) | 85,797 | - | (220,391) |
| Total, net | \$ 1,985,621 | \$ 81,054 | \$ 178,720 | \$ 133,717 | \$ (293,260) | \$ 115 | \$ 2,085,967 |
| Fiscal Year 2014 | | | | | | | |
| Domestic bonds | \$ 86,895 | \$ - | \$ - | \$ 20,530 | \$ (10,171) | \$ - | \$ 97,254 |
| Common equity: | | | | | | | |
| Long domestic | 241,381 | (25) | (62,335) | 7,575 | (7,675) | - | 178,921 |
| Short domestic | (3) | (5) | 2 | 6 | - | - | - |
| Equity: | | | | | | | |
| Private | 33,814 | 17,585 | (16,530) | - | (34,869) | - | - |
| Real estate | 1,481,564 | 41,082 | 174,988 | 398,134 | (323,010) | 509 | 1,773,267 |
| Real assets | 9,602 | - | 862 | - | - | - | 10,464 |
| Split-interest agreements | 148,297 | 634 | 9,597 | 4,716 | (16,062) | - | 147,182 |
| Other | 2,445 | 5 | 272 | 7,587 | (79) | (509) | 9,721 |
| Total, gross | \$ 2,003,995 | \$ 59,276 | \$ 106,856 | \$ 438,548 | \$ (391,866) | \$ - | \$ 2,216,809 |
| Real estate liabilities | (82,000) | - | - | (150,000) | 812 | - | (231,188) |
| Total, net | \$ 1,921,995 | \$ 59,276 | \$ 106,856 | \$ 288,548 | \$ (391,054) | \$ - | \$ 1,985,621 |

All net realized and unrealized gains and losses relating to financial instruments held by MIT shown in Table 6 are reflected in the Statement of Activities. Cumulative unrealized gains related to Level 3 investments totaled \$948.9 million and \$770.2 million as of June 30, 2015 and 2014, respectively. The net change in unrealized gains (losses) related to Level 3 investments held by MIT at June 30, 2015, and June 30, 2014, are disclosed in Table 7.

MIT enters into short sales whereby it sells securities that may or may not be owned by MIT in anticipation of a decline in the price of such securities or in order to hedge portfolio positions. Cash collateral and certain securities owned by MIT were held at counterparty brokers to collateralize these positions and are included in investments on the Statements of Financial Position.

B. Investments (continued)

Table 8 below sets forth a summary of valuation techniques and quantitative information utilized in determining the fair value of MIT's Level 3 investments as of June 30, 2015 and 2014.

| Asset Type <i>(in thousands of dollars)</i> | Fair Value at June 30, 2015 | Fair Value at June 30, 2014 | Valuation Technique | Unobservable Inputs | 2015 Rates | 2014 Rates |
|--|--------------------------------|--------------------------------|--------------------------|------------------------|---------------|---------------|
| Real estate | \$ 1,765,362 | \$ 1,542,069 | Discounted cash flow | Discount Rate | 4.8–9.0% | 5.5–9.0% |
| Equity securities | 50,653 | 162,416 | Discounted cash flow | Discount Rate | 15.3% | 15.3% |
| Split-interest agreements . | 110,722 | 111,358 | Net present value | Discount Rate | 2.25% | 2.20% |
| Real assets | 1,260 | 10,464 | Discount to public price | Discount | 20.0% | 20.0% |
| Other illiquid assets. | 426 | 1,761 | Varies | Varies | Varies | Varies |
| Total assets | \$ 1,928,423 | \$ 1,828,068 | | | | |

Certain investments in real estate, equities, and private investments may be subject to restrictions that (i) limit MIT's ability to withdraw capital after such investment and (ii) may limit the amount that may be withdrawn as of a given redemption date. Most absolute return, domestic equity, and foreign equity commingled funds limit withdrawals to monthly, quarterly, or other periods, and may require notice periods. In addition, certain of these funds are able to designate a portion of the investments as illiquid in "side-pockets," and these funds may not be available for withdrawal until liquidated by the investing fund. Generally, MIT has no discretion as to withdrawal with

respect to its investment in private equity and real estate funds. Distributions are made when sales of assets are made within these funds and the investment cycle for these funds can be as long as 15 to 20 years. These restrictions may limit MIT's ability to respond quickly to changes in market conditions. MIT does have various sources of liquidity at its disposal, including cash, cash equivalents, marketable debt and equity securities, and lines of credit.

Details on the current redemption terms and restrictions by asset class and type of investment are provided in Table 9.

| Asset Class <i>(in thousands of dollars)</i> | 2015 | | 2014 | | Redemption Terms | Redemption Restrictions |
|---|-------------------------|----------------------|-------------------------|---------------------|---|---|
| | Unfunded Commitments | Fair Value | Unfunded Commitments | Fair Value | | |
| Equity: | | | | | | |
| Domestic | \$ 1,923 | \$ 1,880,487 | \$ 9,983 | \$ 1,438,048 | Redemption terms range from 30 days with 2 months notice to 2 years with 3 months notice and 1 closed-end fund not available for redemption | Lock-up provisions range from none to 5 years; 1 fund is not redeemable |
| Foreign | 56,640 | 3,504,707 | 60,880 | 2,532,278 | Redemption terms range from daily with 1 month notice to 3 years with 6 months notice and 1 closed-end fund not available for redemption | Lock-up provisions range from none to 5 years; 1 fund is not redeemable |
| Absolute return . . | 218,025 | 1,734,169 | 171,070 | 1,643,868 | Redemption terms range from 45 days with 2 months notice to closed-end funds which are not redeemable | Lock-up provisions range from none to not redeemable |
| Private | 1,131,554 | 3,132,869 | 1,337,144 | 2,783,585 | Closed-end funds not available for redemption | Not redeemable |
| Real estate | 483,951 | 785,536 | 428,209 | 860,862 | Closed-end funds not available for redemption | Not redeemable |
| Real assets | 116,346 | 605,612 | 140,549 | 704,042 | Redemption terms range from 4 months with 1 month notice to 8 months with 45 days notice for 2 funds with all other funds being closed-end and not redeemable | Not redeemable except for 2 funds with no lock-up provisions |
| Total | \$ 2,008,439 | \$ 11,643,380 | \$ 2,147,835 | \$ 9,962,683 | | |

B. Investments (continued)

MIT performs ongoing due diligence to determine that investment fair value is reasonable as of June 30, 2015 and 2014. In particular, to ensure that the valuation techniques for investments that are categorized within the fair value hierarchy are fair, consistent, and verifiable, MIT has established a Valuation Committee (the “Committee”) that oversees the valuation processes and procedures and ensures that the policies are fair and consistently applied. The Committee is responsible for conducting annual reviews of the valuation policies, evaluating the overall fairness and consistent application of the valuation policies, and performing specific reviews of certain valuations reported. The Committee performs due diligence over the external managers and, based on this review, substantiates NAV as a practical expedient for estimates of fair value of its

investments in external managers. The Committee is composed of senior personnel and contains members who are independent of investment functions. The Committee meets annually, or more frequently, as needed. Members of the Valuation Committee report annually to MIT’s Risk and Audit Committee. The methods described previously in this footnote may produce a fair value that may not be indicative of net realizable value or reflective of future fair values. While MIT believes its valuation methods are appropriate and consistent with those of other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

C. Derivative Financial Instruments and Collateral

MIT maintains an interest rate swap agreement to manage the interest cost and risk associated with a portion of its variable rate debt, described in Note G. Under the agreement, MIT pays a fixed rate of 4.91 percent and receives a payment indexed to the Securities Industry and Financial Market Association (SIFMA) on a notional amount of \$125.0 million. At June 30, 2015, the swap agreement had a total fair value of (\$48.1) million and at June 30, 2014 had a fair value of (\$41.3) million. This swap had a total net loss for 2015 of \$6.8 million and a total net loss of \$0.6 million for 2014. The notional amount of this derivative is not recorded on MIT’s Statements of Financial Position.

For its investment management, MIT uses a variety of financial instruments with off-balance sheet risk involving contractual or optional commitments for future settlement. MIT uses these instruments primarily to manage its exposure to extreme market events and fluctuations in asset classes or currencies. Instruments utilized include futures, total return and credit default swaps, and interest rate cap and swaption agreements. The futures are exchange-traded and the swap, swaptions, and cap agreements are executed over the counter.

Total return swaps involve commitments to pay interest in exchange for a market-linked return, both based on notional amounts. To the extent the total return of the security or index underlying the transaction exceeds or falls short of the offsetting interest rate obligation, MIT will receive a payment from or make a payment to the counterparty.

MIT’s portfolio of interest rate caps and swaptions is designed for protection from significant increases in interest rates. An interest rate swaption is an option to enter into an interest rate swap agreement on pre-set terms at a future date. The purchaser and seller of the swaption agree on the expiration date, option type, exercise style, the terms of the underlying swap and the type of settlement. As the expiration date approaches, the swaption

holder can either notify the seller of its intention to exercise or let the option expire. An interest rate cap places a ceiling on a floating rate of interest on a specified notional principal amount for a specific term. The buyer of the cap uses the cap contract to limit its maximum interest rate exposure. If the buyer’s floating rate rises above the cap strike, the cap contract provides for payments from the seller to the buyer of the cap for the difference between the floating rate and the cap strike. If the floating rate remains below the cap strike, no payments are required. The cap buyer is required to pay an upfront fee or premium for the cap. The cap premium charged by the seller depends upon the market’s assessment of the probability that rates will move through the cap strike over the time horizon of the deal. The payoff is expected to occur in extreme market conditions that would negatively impact MIT’s other assets.

Table 10 summarizes the notional exposure and net ending fair value relative to the financial instruments with off-balance sheet risk as of June 30, 2015 and 2014, related to MIT’s investment management. Derivatives held by limited partnerships and commingled investment vehicles pose no off-balance sheet risk to MIT due to the limited liability structure of these investments. To manage the counterparty credit exposure of MIT’s direct off-balance sheet financial instruments, MIT requires collateral to the maximum extent possible under normal trading practices. Collateral is moved on a daily basis as required by fluctuations in the market. The collateral is generally in the form of debt obligations issued by the US Treasury or cash. In the event of counterparty default, MIT has the right to use the collateral to offset the loss associated with the replacement of the agreements. MIT enters into arrangements only with counterparties believed to be creditworthy. On June 30, 2015, cash collateral and certain securities owned by MIT were held at counterparty brokers to collateralize these positions and are included in investments on the Statements of Financial Position.

C. Derivative Financial Instruments and Collateral (continued)

| <i>(in thousands of dollars)</i> | Notional Exposure | | Net Ending Fair Value * | Net Gain (Loss)** |
|--|---------------------|---------------------|----------------------------|----------------------|
| | Long | Short | | |
| Fiscal Year 2015 | | | | |
| Fixed income instruments: | | | | |
| Fixed income futures | \$ 3,500 | \$ (3,400) | \$ 47 | \$ (82) |
| Options on interest rate exchange agreements | 1,702,000 | - | 8,800 | (10,476) |
| Interest rate caps and floors | 1,000,000 | - | 96 | (485) |
| Interest rate swaps | - | - | - | - |
| Total fixed income instruments | 2,705,500 | (3,400) | 8,943 | (11,043) |
| Commodity and index instruments: | | | | |
| Equity index swaps | - | (212,335) | 5,046 | (25,954) |
| Total commodity and index instruments | - | (212,335) | 5,046 | (25,954) |
| Credit instruments | - | (73,203) | (1,829) | 9 |
| 2015 Total | \$ 2,705,500 | \$ (288,938) | \$ 12,160 | \$ (36,988) |
| Fiscal Year 2014 | | | | |
| Fixed income instruments: | | | | |
| Fixed income futures | \$ - | \$ (19,500) | \$ 82 | \$ 126 |
| Options on interest rate exchange agreements | 2,090,500 | (55,000) | 19,276 | (17,341) |
| Interest rate caps and floors | 1,000,000 | - | 581 | (1,928) |
| Interest rate swaps | - | - | - | (2,059) |
| Total fixed income instruments | 3,090,500 | (74,500) | 19,939 | (21,202) |
| Commodity and index instruments: | | | | |
| Equity index swaps | - | (47,519) | (2,548) | (4,958) |
| Total commodity and index instruments | - | (47,519) | (2,548) | (4,958) |
| Credit instruments | 10,269 | (115,938) | (2,725) | (2,090) |
| 2014 Total | \$ 3,100,769 | \$ (237,957) | \$ 14,666 | \$ (28,250) |
| * The fair value of all credit derivative instruments is reflected in investments, at fair value in the Statements of Financial Position. | | | | |
| ** Net gain (loss) of the credit derivative instruments is located in the non-operating section as net gain (loss) on investments and other assets in the Statement of Activities. | | | | |

C. Derivative Financial Instruments and Collateral (continued)

Table 11 provides further details related to MIT's credit instruments and summarizes the notional amounts and fair value of the purchased and written credit derivatives, classified by the expiration terms and the external credit ratings of the reference obligations at June 30, 2015 and 2014.

The act of entering into a credit default swap contract is often referred to as "buying protection" or "selling protection" on an underlying reference obligation. The buyer is obligated to make premium payments to the seller over the term of the contract in return for a contingent payment upon the occurrence of a credit event with respect to the underlying obligation. The seller bears the obligation to "protect" the buyer in the event of default of

the underlying issuer. Upon this event, the cash payment which the buyer receives is equal to the clearing price established by an auction of credit default swap claims, which is designed to approximate the recovery value of an unsecured claim on the issuer in default. The swap will last for a predetermined amount of time, typically five years. Upon termination of the swap, the buyer is no longer obligated to make any premium payments and there is no other exchange of capital.

Table 11. Credit Derivative Instruments

| <i>(in thousands of dollars)</i> | Purchased Protection | | | | Written Protection Notional Amount | | | |
|---------------------------------------|----------------------------|-----------------------|-------------------|------------------|------------------------------------|---|-------------------------------|--|
| | Purchased Notional Amounts | Purchased Fair Value* | Years to Maturity | | Written Notional Amounts | Offsetting Purchased Credit Protection ** | Net Written Credit Protection | Net Written Credit Protection Fair Value |
| | | | < 5 Years | 5–10 Years | | | | |
| Fiscal Year 2015 | | | | | | | | |
| Credit rating on underlying or index: | | | | | | | | |
| A- to AAA | \$ 44,571 | \$ (1,109) | \$ 10,000 | \$ 34,571 | \$ - | \$ - | \$ - | \$ - |
| BBB- to BBB+ | 28,632 | (720) | 5,175 | 23,457 | - | - | - | - |
| 2015 Total | \$ 73,203 | \$ (1,829) | \$ 15,175 | \$ 58,028 | \$ - | \$ - | \$ - | \$ - |
| Fiscal Year 2014 | | | | | | | | |
| Credit rating on underlying or index: | | | | | | | | |
| A- to AAA | \$ 68,692 | \$ (1,789) | \$ 15,000 | \$ 53,692 | \$ 10,269 | \$ - | \$ - | \$ 120 |
| BBB- to BBB+ | 36,977 | (975) | 5,000 | 31,977 | - | (10,269) | - | (81) |
| 2014 Total | \$ 105,669 | \$ (2,764) | \$ 20,000 | \$ 85,669 | \$ 10,269 | \$ (10,269) | \$ - | \$ 39 |

* The fair value of all credit derivative instruments is reflected in investments, at fair value in the Statements of Financial Position.

** Net gain (loss) of the credit derivative instruments is located in the non-operating section as net gain (loss) on investments and other assets in the Statement of Activities.

C. Derivative Financial Instruments and Collateral (continued)

Counterparty risk may be partially or completely mitigated through master netting agreements included within an International Swap and Derivatives Association, Inc. ("ISDA") Master Agreement between MIT and each of its counterparties. The ISDA Master Agreement allows MIT to offset with the counterparty certain derivative instruments' payables and/or receivables with collateral held with each counterparty. To the extent amounts due from the counterparties are not fully

collateralized contractually or otherwise, there is the risk of loss from counterparty non-performance. As of June 30, 2015, MIT has elected not to offset recognized assets and liabilities in the Statements of Financial Position Investments Table. The following tables, 12 and 13, summarize the effect that offsetting of recognized assets and liabilities could have in the Statements of Financial Position Investments Table.

Table 12. Offsetting of Financial and Derivative Assets and Liabilities

| | 2015 | | | 2014 | | |
|--|------------------|---|--------------------|-------------------|---|--------------------|
| | Gross Amount | Cash/Treasury Collateral Posted/ (Received) | Net Amount | Gross Amount | Cash/Treasury Collateral Posted/ (Received) | Net Amount |
| <i>(in thousands of dollars)</i> | | | | | | |
| Assets | | | | | | |
| Counterparty A..... | \$ 4,184 | \$ (4,386) | \$ (202) | \$ 9,250 | \$ (9,519) | \$ (269) |
| Counterparty B..... | 59,895 | (61,220) | (1,325) | 46,243 | (47,385) | (1,142) |
| Counterparty C..... | - | - | - | 27 | - | 27 |
| Counterparty D..... | - | - | - | - | - | - |
| Counterparty E..... | - | - | - | - | - | - |
| Counterparty F..... | - | - | - | - | - | - |
| Counterparty G..... | 30,088 | (31,004) | (916) | 38,924 | (39,709) | (785) |
| Counterparty H..... | - | - | - | 42,200 | (43,165) | (965) |
| Counterparty I..... | - | - | - | - | - | - |
| Counterparty J..... | - | - | - | - | - | - |
| Counterparty K..... | 9,759 | (12,495) | (2,736) | 10,646 | (10,599) | 47 |
| Total assets..... | 103,926 | (109,105) | (5,179) | 147,290 | (150,377) | (3,087) |
| Liabilities | | | | | | |
| Counterparty A..... | (2) | - | (2) | (108) | 130 | 22 |
| Counterparty B..... | (470) | 720 | 250 | (692) | 720 | 28 |
| Counterparty C..... | (201) | - | (201) | - | - | - |
| Counterparty D..... | (470) | 721 | 251 | (362) | 305 | (57) |
| Counterparty E..... | - | - | - | (51) | 205 | 154 |
| Counterparty F..... | - | - | - | (399) | 335 | (64) |
| Counterparty G..... | (48,081) | - | (48,081) | (41,300) | - | (41,300) |
| Counterparty H..... | - | - | - | - | - | - |
| Counterparty I..... | (316) | 420 | 104 | (378) | 420 | 42 |
| Counterparty J..... | (369) | 415 | 46 | (801) | 770 | (31) |
| Counterparty K..... | - | - | - | (2,549) | 2,549 | - |
| Total liabilities..... | (49,909) | 2,276 | (47,633) | (46,640) | 5,434 | (41,206) |
| Total assets and liabilities, net | \$ 54,017 | \$ (106,829) | \$ (52,812) | \$ 100,650 | \$ (144,943) | \$ (44,293) |

Maximum risk of loss from counterparty credit risk on over-the-counter derivatives is generally the aggregate unrealized appreciation in excess of any collateral pledged by the counterparty. ISDA Master Agreements allow MIT or the counterparties to an over-the-counter derivative to terminate the

contract prior to maturity in the event either party fails to meet the terms in the ISDA Master Agreements. This would cause an accelerated payment of net liability, if owed to the counterparty.

C. Derivative Financial Instruments and Collateral (continued)

Table 13 below reconciles the net recognized assets and liabilities, as shown in Table 12, to derivative financial instruments as shown in Table 6.

| <i>(in thousands of dollars)</i> | 2015 | 2014 |
|------------------------------------|-------------------------|--------------------------|
| Derivatives from Table 6 | \$ (35,920) | \$ (26,640) |
| Repurchase agreements | 89,984 | 127,372 |
| Fixed income futures | (47) | (82) |
| Total | <u>\$ 54,017</u> | <u>\$ 100,650</u> |

D. Pledges Receivable

Table 14 below shows the time periods in which pledges receivable at June 30, 2015 and 2014 are expected to be realized.

| <i>(in thousands of dollars)</i> | 2015 | 2014 |
|--|--------------------------|--------------------------|
| In one year or less | \$ 192,149 | \$ 156,094 |
| Between one year and five years | 393,518 | 227,752 |
| More than five years | 34,218 | 160,760 |
| Less: allowance for unfulfilled pledges | (61,790) | (54,270) |
| Pledges receivable, net | <u>\$ 558,095</u> | <u>\$ 490,336</u> |

A review of pledges is periodically made with regard to collectability. As a result, the allowance for pledges that may not be fulfilled is adjusted, and some pledges have been cancelled and are no longer recorded in the financial statements. Pledges are discounted in the amount of \$35.5 million and \$36.8 million in 2015 and 2014, respectively. MIT has gross conditional pledges, not recorded, for the promotion of education and research of \$76.6 million and \$39.3 million in 2015 and 2014, respectively. MIT has pledges receivable relating to research in the amount of \$28.3 million and \$21.4 million in 2015 and 2014, respectively.

Pledges receivable are classified as Level 3 under the valuation hierarchy described in Note B.

Table 15 below is a rollforward of the pledges receivable at June 30, 2015 and 2014.

| <i>(in thousands of dollars)</i> | 2015 | 2014 |
|---|--------------------------|--------------------------|
| Balance at beginning of the year | \$ 490,336 | \$ 404,594 |
| New pledges | 201,495 | 191,973 |
| Pledge payments received | (127,446) | (94,377) |
| Decrease (increase) in pledge discount | 1,230 | (2,534) |
| Increase in reserve for unfulfilled pledges | (7,520) | (9,320) |
| Balance at the end of the year | <u>\$ 558,095</u> | <u>\$ 490,336</u> |

E. Student Notes Receivable

Table 16 below details the components of student notes receivable at June 30, 2015 and 2014.

| | 2015 | 2014 |
|---|-------------------------|-------------------------|
| Institute-funded student notes receivable | \$ 12,894 | \$ 13,426 |
| Perkins student notes receivable | <u>35,784</u> | <u>37,743</u> |
| Total student notes receivable | 48,678 | 51,169 |
| Less: allowance for doubtful accounts | (3,000) | (3,000) |
| Student notes receivable, net | <u>\$ 45,678</u> | <u>\$ 48,169</u> |

Perkins student notes receivable are funded by the US Government and by MIT. Funds advanced by the US Government for this program are ultimately refundable to the US Government and are classified as liabilities in US Government advances for student loans in the Statements of Financial Position. Due to the nature and terms of the student loans, which are subject to significant restrictions, it is not feasible to determine the fair value of such loans.

Allowance for Credit Losses

Management regularly assesses the adequacy of the allowance for credit losses by performing ongoing evaluations of the student loan portfolio, including such factors as the differing economic risks associated with each loan category, the financial condition of specific borrowers, the economic environment in which the borrowers operate, the level of delinquent loans, the value of any collateral and, where applicable, the existence of any guarantees or indemnifications. MIT's Perkins loans receivable represents the amounts due from current and former students under the Federal Perkins Loan Program. Loans disbursed under the Federal Perkins Loan Program are able to be assigned to the US Government in certain non-repayment situations. In these situations, the Federal portion of the loan balance is guaranteed.

Factors also considered by management when performing its assessment, in addition to general economic conditions and the other factors described above, included, but were not limited to, a detailed review of the aging of the student loan receivable and a review of the default rate by loan category in comparison to prior years. The level of the allowance is adjusted based on the results of management's analysis.

Loans less than 120 days delinquent are deemed to have a minimal delay in payment and are generally not written off but are reserved in accordance with the terms discussed above. Loans more than 120 days delinquent are subject to standard collection practices, including litigation. Only loans that are deemed uncollectible are written off and this only occurs after several years of unsuccessful collection, including placement at more than one external collection agency.

Considering the other factors already discussed herein, management considers the allowance for credit losses at June 30, 2015 and 2014 to be prudent and reasonable. Furthermore, MIT's allowance is general in nature and is available to absorb losses from any loan category. Management believes that the allowance for credit losses at June 30, 2015 and 2014 is adequate to absorb credit losses inherent in the portfolio as of that date.

Changes in the allowance for credit losses for the years ended June 30, 2015 and 2014 were as shown in Table 17.

| | 2015 | 2014 |
|---|------------------------|------------------------|
| Balance at beginning of the year | \$ 3,000 | \$ 3,000 |
| Provision for credit losses | 264 | 126 |
| Net charge-offs | <u>(264)</u> | <u>(126)</u> |
| Balance at the end of the year | <u>\$ 3,000</u> | <u>\$ 3,000</u> |

F. Accounts Payable, Accruals, and Other Liabilities

MIT's accounts payable, accruals, and other liabilities at June 30, 2015 and 2014 are shown in Table 18 below.

| <i>(in thousands of dollars)</i> | 2015 | 2014 |
|---|-------------------|-------------------|
| Accounts payable and accruals | \$ 373,825 | \$ 352,668 |
| Accrued vacation | 62,463 | 59,291 |
| Total | \$ 436,288 | \$ 411,959 |

G. Borrowings

MIT's outstanding borrowings at June 30, 2015 and 2014 are shown in Table 19 below.

| <i>(in thousands of dollars / due dates are calendar based / par values as of 2015)</i> | 2015 | 2014 |
|---|---------------------|---------------------|
| Educational plant | | |
| Massachusetts Development Finance Agency (MassDevelopment) | | |
| Series I, 5.20%, due 2028, par value \$30,000 | \$ 30,723 | \$ 30,781 |
| Series J-1, variable rate, due 2031 | 125,000 | 125,000 |
| Series J-2, variable rate, due 2031 | 125,000 | 125,000 |
| Series K, 5.25%–5.5%, due 2012–2032, par value \$203,500 | 213,010 | 213,673 |
| Series L, 3.0%–5.25%, due 2004–2033, par value \$141,670 | 150,357 | 151,017 |
| Series M, 5.25%, due 2014–2030, par value \$122,000 | 130,264 | 140,437 |
| Series N, par value \$0 | - | 327,965 |
| Series O, 4.0%–5.0%, due 2017, par value \$88,000 | 89,117 | 268,716 |
| Total MassDevelopment | \$ 863,471 | \$ 1,382,589 |
| Medium Term Notes Series A, 7.125%, due 2026, par value \$17,415 | 17,371 | 17,367 |
| Medium Term Notes Series A, 7.25%, due 2096, par value \$45,604 | 45,451 | 45,449 |
| Taxable Bonds, Series B, 5.60%, due 2111, par value \$750,000* | 747,019 | 746,987 |
| Taxable Bonds, Series C, 4.68%, due 2114, par value \$550,000* | 550,000 | 550,000 |
| Taxable Bonds, Series D, 2.051–3.959%, due 2019-2038, par value \$522,410** | 522,410 | - |
| Notes payable to bank, variable rate, due 2017 | 113,033 | 83,033 |
| Total Taxable | \$ 1,995,284 | \$ 1,442,836 |
| Total educational plant | \$ 2,858,755 | \$ 2,825,425 |
| Other | | |
| Notes payable to bank, variable rate, due 2017 | 63,476 | 93,476 |
| Total borrowings | \$ 2,922,231 | \$ 2,918,901 |

* The proceeds of Taxable Bonds, Series B and C were held as investments as of June 30, 2014 and were in the process of being invested in physical assets as of June 30, 2015.

** Series D is an advance refunding, defeasing portions of Series N and Series O.

Fair value of the outstanding debt is approximately 9 and 11 percent greater than the carrying value in 2015 and 2014, respectively. It is classified as Level 3 under the valuation hierarchy described in Note B. Fair value is based on estimates using current interest rates available for similarly rated debt of the same remaining maturities for tax-exempt debt and rates for recent trades for taxable debt.

G. Borrowings (continued)

The aggregate amounts of debt payments and sinking fund requirements for each of the next five fiscal years are shown in Table 20 below.

| 2016 | \$ 9,585 |
|------------|----------|
| 2017 | 98,090 |
| 2018 | 26,500 |
| 2019 | 92,410 |
| 2020 | 10,620 |

MIT maintains a line of credit with a major financial institution for an aggregate commitment of \$500.0 million. As of June 30, 2015, \$323.5 million was available under this line of credit. The line of credit expires on March 31, 2017.

During 2015, MIT issued \$522.4 million in Series D taxable bonds to advance refund and defease \$275.2 million of Series N and \$178.5 million of Series O tax-exempt bonds.

Cash paid for interest on long-term debt in 2015 and 2014 was \$128.9 million and \$107.2 million, respectively.

Variable interest rates at June 30, 2015 are shown in Table 21 below.

| | Amount | Rate |
|----------------------------------|------------|-------|
| MassDevelopment Series J-1 | \$ 125,000 | 0.05% |
| MassDevelopment Series J-2 | 125,000 | 0.06% |
| Notes payable to bank | 176,509 | 0.79% |

In the event that MIT receives notice of any optional tender on its Series J-1 and Series J-2 variable-rate bonds, or if these bonds become subject to mandatory tender, the purchase price of the bonds will be paid from the remarketing of such bonds. However, if the remarketing proceeds are insufficient, MIT will be obligated to purchase the bonds tendered at 100 percent of par on the tender date.

H. Commitments and Contingencies

Federal Government Funding

MIT receives funding or reimbursement from Federal agencies for sponsored research under Government grants and contracts. These grants and contracts provide for reimbursement of indirect costs based on rates negotiated with the Office of Naval Research (ONR), MIT's cognizant Federal agency. MIT's indirect cost reimbursements have been based on fixed rates with carryforward of under- or over-recoveries. At June 30, 2015 and 2014, MIT recorded a net over-recovery of \$19.5 million and \$14.9 million, respectively.

The DCAA is responsible for auditing indirect charges to grants and contracts in support of ONR's negotiating responsibility. MIT has final audited rates through 2009. MIT's 2015 research revenues of \$1,576.6 million include reimbursement of indirect costs of \$217.9 million, which includes the adjustment for the variance between the indirect cost income determined by the fixed rates and actual costs for 2015. In 2014, research revenues were \$1,523.8 million, which included reimbursement of indirect costs of \$225.6 million.

Leases

At June 30, 2015, there were no capital lease obligations. MIT is committed under certain operating (rental) leases. Rent expense incurred under operating lease obligations was \$41.3 million and \$45.1 million in 2015 and 2014, respectively. Future minimum payments under operating leases are shown in Table 22 below.

| | |
|------------|-----------|
| 2016 | \$ 38,713 |
| 2017 | 39,888 |
| 2018 | 38,761 |
| 2019 | 28,323 |
| 2020 | 28,934 |

Investments

As of June 30, 2015, \$11.3 million of investments were pledged as collateral to various suppliers and Government agencies.

H. Commitments and Contingencies (continued)

Future Construction

MIT has contracted for the educational plant in the amount of \$225.4 million at June 30, 2015. It is expected that the resources to satisfy these commitments will be provided from unexpended plant funds, anticipated gifts, and unrestricted funds. MIT will be committing additional resources to planned major construction projects and improvements to the current infrastructure over the next several years.

Related Entities

MIT has entered into agreements, including collaborations with third-party not-for-profit, and for-profit entities, for education, research, and technology transfers. Some of these

agreements involve funding from foreign governments. These agreements subject MIT to greater financial risk than do its normal operations. In the opinion of management, the likelihood of realization of increased financial risks by MIT under these agreements is remote.

General

MIT is subject to certain other legal proceedings and claims that arise in the normal course of operations. In the opinion of management, the ultimate outcome of these actions will not have a material effect on MIT's financial position.

I. Functional Expense Classification

MIT's expenditures on a functional basis are shown in Table 23 below.

| | 2015 | 2014 |
|--|---------------------|---------------------|
| General and administrative | \$ 763,680 | \$ 713,103 |
| Instruction and unsponsored research | 811,495 | 777,382 |
| Sponsored research | 1,386,334 | 1,283,189 |
| Auxiliary enterprises | 134,076 | 129,692 |
| Operation of Alumni Association | 15,534 | 15,151 |
| Total operating expenses | \$ 3,111,119 | \$ 2,918,517 |

J. Retirement Benefits

MIT offers a defined benefit plan and a defined contribution plan to its employees. The plans cover substantially all MIT employees.

MIT also offers a postretirement welfare benefit plan (certain healthcare and life insurance benefits) for retired employees. Substantially all MIT employees may become eligible for those benefits if they reach a qualifying retirement age while working for MIT. The healthcare component of the welfare plan is paid for in part by retirees, their covered dependents, and beneficiaries. Benefits are provided through various insurance companies whose charges are based either on the claims and administrative expenses paid during the year or annual insured premiums. The life insurance component of the welfare plan includes basic life insurance and supplemental life insurance. The basic life insurance plan is non-contributory and covers the retiree only. The supplemental life insurance plan is paid for by the retiree. MIT maintains a trust to pay for postretirement welfare benefits.

MIT contributes to the defined benefit plan amounts that are actuarially determined to provide the retirement plan

with sufficient assets to meet future benefit requirements. There was a \$7.5 million and a \$20.4 million contribution to the defined benefit plan in 2015 and 2014, respectively. MIT also contributed \$28.7 million and \$31.5 million to the postretirement welfare benefit plan in 2015 and 2014, respectively.

For purposes of calculating net periodic cost for the defined benefit plan, plan amendments are amortized on a straight-line basis over the average future service to expected retirement of active participants at the date of the amendment. Cumulative gains and losses (including changes in assumptions) in excess of 10 percent of the greater of the projected benefit obligation or the market-related value of assets are amortized over the average future service of active participants. The annual amortization shall not be less than the total amount of unrecognized gains and losses up to \$1.0 million.

J. Retirement Benefits (continued)

The amount contributed and expenses recognized during 2015 and 2014 related to the defined contribution plan were \$51.5 million and \$48.6 million, respectively.

For purposes of calculating net periodic cost for the postretirement welfare benefit plan, a portion of the current obligation related to the transition to the accounting standard *Employers' Accounting for Postretirement Benefits Other than Pensions* was amortized on a straight-line basis over 20 years from the date of adoption of that statement in 1994.

Plan amendments are amortized on a straight-line basis over the average future service to full eligibility of active participants at the date of amendment. Cumulative gains and losses (including changes in assumptions) in excess of 10 percent of the greater of the plan's obligation or the market-related value of assets are amortized over the average future service of active participants. The annual amortization shall not be less than the total amount of unrecognized gains and losses up to \$1.0 million.

Components of Net Periodic Benefit Cost

Table 24 summarizes the components of net periodic benefit cost recognized in operating activity and other amounts recognized in non-operating activity in unrestricted net assets for the years ended June 30, 2015 and 2014.

| <i>(in thousands of dollars)</i> | Defined Benefit Plan | | Postretirement Welfare Benefit Plan | |
|---|----------------------|--------------------|-------------------------------------|--------------------|
| | 2015 | 2014 | 2015 | 2014 |
| Components of net periodic benefit cost recognized in operating activity: | | | | |
| Service cost | \$ 80,840 | \$ 71,661 | \$ 25,950 | \$ 22,079 |
| Interest cost | 141,805 | 141,213 | 24,453 | 24,210 |
| Expected return on plan assets | (223,648) | (207,532) | (30,623) | (27,204) |
| Amortization of net actuarial loss | 24,596 | 14,066 | 6,064 | 5,822 |
| Amortization of prior service cost | 953 | 953 | (2,801) | (2,801) |
| Net periodic benefit cost recognized in operating activity | \$ 24,546 | \$ 20,361 | \$ 23,043 | \$ 22,106 |
| Other amounts recognized in non-operating activity in unrestricted net assets: | | | | |
| Current year actuarial loss (gain) | 56,748 | (25,547) | (41,250) | (10,811) |
| Amortization of actuarial gain | (24,596) | (14,066) | (6,064) | (5,822) |
| Amortization of prior service cost | (953) | (953) | 2,801 | 2,801 |
| Total other amounts recognized in non-operating activity | \$ 31,199 | \$ (40,566) | \$ (44,513) | \$ (13,832) |
| Total recognized | \$ 55,745 | \$ (20,205) | \$ (21,470) | \$ 8,274 |

The estimated net actuarial loss and prior service cost for the defined benefit plan that will be amortized from unrestricted net assets into net periodic benefit cost during the next fiscal year are \$20.1 million and \$1.0 million, respectively. The estimated

net actuarial loss and prior service credit for the postretirement welfare benefit plan that will be amortized from unrestricted net assets into net periodic benefit cost during the next fiscal year are \$1.0 million and \$(2.8) million, respectively.

J. Retirement Benefits (continued)

Cumulative amounts recognized as non-operating changes in unrestricted net assets are summarized in Table 25 for the years ended June 30, 2015 and 2014.

| <i>(in thousands of dollars)</i> | Defined Benefit Plan | | Postretirement Welfare Benefit Plan | |
|---|----------------------|-------------------|-------------------------------------|------------------|
| | 2015 | 2014 | 2015 | 2014 |
| Amounts recognized in unrestricted net assets consist of: | | | | |
| Net actuarial loss | \$ 315,879 | \$ 283,726 | \$ 9,626 | \$ 56,937 |
| Prior service cost/(credit) | 1,926 | 2,880 | (13,416) | (16,216) |
| Total cumulative amounts recognized in unrestricted net assets | \$ 317,805 | \$ 286,606 | \$ (3,790) | \$ 40,721 |

Benefit Obligations and Fair Value of Assets

Table 26 summarizes the benefit obligations, plan assets, and amounts recognized in the Statements of Financial Position for MIT's retirement benefit plans. MIT uses a June 30 measurement date for its defined benefit and postretirement welfare benefit plans.

| <i>(in thousands of dollars)</i> | Defined Benefit Plan | | Postretirement Welfare Benefit Plan | |
|--|----------------------|---------------------|-------------------------------------|--------------------|
| | 2015 | 2014 | 2015 | 2014 |
| Change in projected benefit obligations: | | | | |
| Projected benefit obligations at beginning of year | \$ 3,140,704 | \$ 2,803,784 | \$ 539,262 | \$ 479,117 |
| Service cost | 80,840 | 71,661 | 25,950 | 22,079 |
| Interest cost | 141,805 | 141,213 | 24,453 | 24,210 |
| Retiree contributions | - | - | 4,881 | 4,346 |
| Net benefit payments, transfers, and other expenses | (113,739) | (124,927) | (24,232) | (23,512) |
| Assumption changes and actuarial net loss (gain) . . | 182,078 | 248,973 | (21,349) | 33,022 |
| Projected benefit obligations at end of the year . . . | \$ 3,431,688 | \$ 3,140,704 | \$ 548,965 | \$ 539,262 |
| Change in plan assets: | | | | |
| Fair value of plan assets at beginning of the year . . | 3,135,764 | 2,758,276 | 495,372 | 414,981 |
| Actual return on plan assets | 348,975 | 482,053 | 50,522 | 71,038 |
| Employer contributions | 7,500 | 20,362 | 28,651 | 31,514 |
| Retiree contributions | - | - | 4,881 | 4,346 |
| Net benefit payments, transfers, and other expenses | (113,739) | (124,927) | (30,506) | (26,507) |
| Fair value of plan assets at end of the year | 3,378,500 | 3,135,764 | 548,920 | 495,372 |
| Unfunded status at end of the year | \$ (53,188) | \$ (4,940) | \$ (45) | \$ (43,890) |
| Amounts recognized in the Statements of Financial Position consist of: | | | | |
| Total accrued benefit liabilities | \$ (53,188) | \$ (4,940) | \$ (45) | \$ (43,890) |

J. Retirement Benefits (continued)

The accumulated benefit obligation for MIT's defined benefit plan was \$3,075.9 million and \$2,922.1 million at June 30, 2015 and 2014, respectively.

MIT provides retiree drug coverage through an Employer Group Waiver Plan (EGWP). Under EGWP, the cost of drug coverage is offset through direct federal subsidies, brand-name drug discounts, and reinsurance reimbursements.

the expected average rate of earnings on the funds invested or to be invested to provide for the benefits included in the benefit obligation. The long-term rate of return assumption is determined based on a number of factors, including historical market index returns, the anticipated long-term asset allocation of the plans, historical plan return data, plan expenses, and the potential to outperform market index returns.

Assumptions and Healthcare Trend Rates

Table 27 summarizes assumptions and healthcare trend rates. The expected long-term rate of return assumption represents

| <i>(in thousands of dollars)</i> | Defined Benefit Plan | | Postretirement Welfare Benefit Plan | |
|---|----------------------|-------|-------------------------------------|-------|
| | 2015 | 2014 | 2015 | 2014 |
| Assumptions used to determine benefit obligation as of June 30: | | | | |
| Discount rate | 4.62% | 4.50% | 4.54% | 4.43% |
| Rate of compensation increase* | 4.00% | 4.00% | | |
| Assumptions used to determine net periodic benefit cost for the year ended June 30: | | | | |
| Discount rate | 4.50% | 5.03% | 4.43% | 4.95% |
| Expected long-term return on plan assets | 8.00% | 8.00% | 7.00% | 7.00% |
| Rate of compensation increase* | 4.00% | 4.00% | | |
| Assumed healthcare cost trend rates: | | | | |
| Healthcare cost trend rate assumed for next year | | | 7.00% | 7.00% |
| Rate to which the cost trend rate is assumed to decline (the ultimate trend rate) | | | 4.75% | 4.75% |
| Year the rate reaches the ultimate trend rate | | | 2021 | 2021 |

* The average rate of salary increase is assumed to be 4.00% for 2016 and thereafter.

As an indicator of sensitivity, a one percentage point change in the assumed healthcare cost trend rate would affect 2015 as shown in Table 28 below.

| <i>(in thousands of dollars)</i> | 1% Point Increase | 1% Point Decrease |
|---|-------------------|-------------------|
| Effect on 2015 postretirement service and interest cost | \$ 8,457 | \$ (6,779) |
| Effect on postretirement benefit obligation as of June 30, 2015 | 79,036 | (64,866) |

Plan Investments

The investment objectives for the assets of the plans are to minimize expected funding contributions and to meet or exceed the rate of return assumed for plan funding purposes over the long term. The nature and duration of benefit obligations, along with assumptions concerning asset class returns and return correlations, are considered when determining an appropriate asset allocation to achieve the investment objectives.

Investment policies and strategies governing the assets of the plans are designed to achieve investment objectives within prudent risk parameters. Risk management practices include the use of external investment managers, the maintenance of a portfolio diversified by asset class, investment approach, security holdings, and the maintenance of sufficient liquidity to meet benefit obligations as they come due.

J. Retirement Benefits (continued)

Tables 29A and 29B present investments at fair value of MIT's defined benefit plan and postretirement welfare benefit plan, which are included in plan net assets as of June 30, 2015 and 2014, grouped by the valuation hierarchy detailed in Note B. There were no transfers in and out of Level 1 and Level 2 fair value measurements in 2015 or 2014.

Table 29A. Defined Benefit Plan Investments

| <i>(in thousands of dollars)</i> | Quoted Prices in Active Markets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Unobservable Inputs (Level 3) | NAV as Practical Expedient (NAV) | Total Fair Value |
|---|---|---|---|--|---------------------|
| Fiscal Year 2015 | | | | | |
| Cash and cash equivalents | \$ 204,917 | \$ - | \$ - | \$ - | \$ 204,917 |
| US Treasury | 298,529 | - | - | - | 298,529 |
| US Government agency | - | 11,183 | - | - | 11,183 |
| Foreign bonds | - | 144 | - | - | 144 |
| Common equity: | | | | | |
| Long domestic | 32,253 | - | 74 | - | 32,327 |
| Long foreign | 122,483 | 902 | - | - | 123,385 |
| Equity:* | | | | | |
| Absolute return | - | - | - | 334,619 | 334,619 |
| Domestic | - | - | - | 504,042 | 504,042 |
| Foreign | - | - | - | 809,825 | 809,825 |
| Private | - | - | - | 629,042 | 629,042 |
| Real estate* | - | 1,466 | - | 273,468 | 274,934 |
| Real assets* | - | - | 261 | 133,386 | 133,647 |
| Other | 5,069 | - | 760 | - | 5,829 |
| Derivatives | 13 | 1,209 | - | - | 1,222 |
| Total plan investments | \$ 663,264 | \$ 14,904 | \$ 1,095 | \$ 2,684,382 | \$ 3,363,645 |
| Fiscal Year 2014 | | | | | |
| Cash and cash equivalents | \$ 307,951 | \$ - | \$ - | \$ - | \$ 307,951 |
| US Treasury | 262,062 | - | - | - | 262,062 |
| US Government agency | - | 14,816 | - | - | 14,816 |
| Foreign bonds | - | - | - | - | - |
| Common equity: | | | | | |
| Long domestic | 34,248 | - | 909 | - | 35,157 |
| Long foreign | 66,543 | - | - | - | 66,543 |
| Equity:* | | | | | |
| Absolute return | - | - | - | 339,650 | 339,650 |
| Domestic | - | - | - | 400,981 | 400,981 |
| Foreign | - | - | - | 660,205 | 660,205 |
| Private | - | - | - | 545,295 | 545,295 |
| Real estate* | - | - | - | 311,942 | 311,942 |
| Real assets* | - | - | 2,706 | 176,446 | 179,152 |
| Other | - | - | 1,191 | - | 1,191 |
| Derivatives | 24 | (1,265) | - | - | (1,241) |
| Total plan investments | \$ 670,828 | \$ 13,551 | \$ 4,806 | \$ 2,434,519 | \$ 3,123,704 |

* Real assets, real estate, and equity categories include commingled vehicles that invest in these types of investments.

J. Retirement Benefits (continued)

Table 29B. Postretirement Welfare Benefit Plan Investments

| <i>(in thousands of dollars)</i> | Quoted Prices in Active Markets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Unobservable Inputs (Level 3) | Measured at Net Asset Value (NAV) | Total Fair Value |
|---|---|---|---|---|---------------------|
| Fiscal Year 2015 | | | | | |
| Cash and cash equivalents | \$ 18,502 | \$ - | \$ - | \$ - | \$ 18,502 |
| Domestic bonds | - | 71,428 | - | - | 71,428 |
| Foreign bonds | - | 10 | - | - | 10 |
| Common equity: | | | | | |
| Long domestic | 25,177 | - | - | - | 25,177 |
| Long foreign | 18,098 | 123 | - | - | 18,221 |
| Equity:* | | | | | |
| Absolute return | - | - | - | 68,771 | 68,771 |
| Domestic | - | - | - | 79,074 | 79,074 |
| Foreign | - | - | - | 194,610 | 194,610 |
| Private | - | - | - | 48,593 | 48,593 |
| Real estate | - | 200 | - | 20,362 | 20,562 |
| Real assets* | - | - | - | 3,763 | 3,763 |
| Other | 362 | - | - | - | 362 |
| Total plan investments | \$ 62,139 | \$ 71,761 | \$ - | \$ 415,173 | \$ 549,073 |
| Fiscal Year 2014 | | | | | |
| Cash and cash equivalents | \$ 35,960 | \$ - | \$ - | \$ - | \$ 35,960 |
| Domestic bonds | - | 78,182 | - | - | 78,182 |
| Foreign bonds | - | - | - | - | - |
| Common equity: | | | | | |
| Long domestic | 26,789 | - | - | - | 26,789 |
| Long foreign | 5,022 | - | - | - | 5,022 |
| Equity:* | | | | | |
| Absolute return | - | - | - | 69,554 | 69,554 |
| Domestic | - | - | - | 65,018 | 65,018 |
| Foreign | - | - | - | 156,344 | 156,344 |
| Private | - | - | - | 32,032 | 32,032 |
| Real estate | - | - | - | 20,677 | 20,677 |
| Real assets* | - | - | - | 6,032 | 6,032 |
| Total plan investments | \$ 67,771 | \$ 78,182 | \$ - | \$ 349,657 | \$ 495,610 |

* Real assets and equity categories include commingled vehicles that invest in these types of investments.

J. Retirement Benefits (continued)

Table 30 is a rollforward of the investments classified by MIT's defined benefit plan within Level 3 of the fair value hierarchy defined in Note B as at June 30, 2015 and 2014.

| Table 30. Rollforward of Level 3 Investments | | | | | | | |
|---|-------------------------|-------------------------------|---------------------------------|-------------|-------------|-------------|----------------------|
| <i>(in thousands of dollars)</i> | Fair Value Beginning | Realized Gains (Losses) | Unrealized Gains (Losses) | Purchases | Sales | Transfers | Fair Value Ending |
| Defined Benefit Plan | | | | | | | |
| Fiscal Year 2015 | | | | | | | |
| Common equity: | | | | | | | |
| Long domestic | \$ 909 | \$ - | \$ (835) | \$ - | \$ - | \$ - | \$ 74 |
| Long foreign. | - | - | - | - | - | - | - |
| Real assets | 2,706 | - | (2,445) | - | - | - | 261 |
| Other | 1,191 | - | (431) | - | - | - | 760 |
| Total | \$ 4,806 | \$ - | \$ (3,711) | \$ - | \$ - | \$ - | \$ 1,095 |
| Fiscal Year 2014 | | | | | | | |
| Common equity: | | | | | | | |
| Long domestic | \$ 2,100 | \$ - | \$ - | \$ - | \$ - | \$ (1,191) | \$ 909 |
| Long foreign. | - | - | - | - | - | - | - |
| Real assets | 2,486 | - | 220 | - | - | - | 2,706 |
| Other | - | - | - | - | - | 1,191 | 1,191 |
| Total | \$ 4,586 | \$ - | \$ 220 | \$ - | \$ - | \$ - | \$ 4,806 |

J. Retirement Benefits (continued)

The plans have made investments in various long-lived partnerships, and in other cases have entered into contractual arrangements that may limit their ability to initiate redemptions due to notice periods, lock-ups, and gates. Details on estimated remaining life and current redemption terms and restrictions by asset class and type of investment for both the defined benefit plan and postretirement welfare benefit plan are provided in Table 31 below as of June 30, 2015 and 2014.

| Table 31. Unfunded Commitments | | | | | | |
|--|----------------------|---------------------|----------------------|---------------------|---|--|
| <i>(in thousands of dollars)</i> | 2015 | | 2014 | | Redemption Terms | Redemption Restrictions |
| | Unfunded Commitments | Fair Value | Unfunded Commitments | Fair Value | | |
| Defined Benefit Plan | | | | | | |
| Equity: | | | | | | |
| Domestic | \$ 433 | \$ 504,042 | \$ 1,027 | \$ 400,981 | Redemption terms range from 4 months with 30 days notice to 25 months with 3 months notice and 1 closed-end fund not available for redemption | Lock-up provisions range from none to 3 months; 1 fund is not redeemable |
| Foreign | 12,710 | 809,825 | 11,760 | 660,205 | Redemption terms range from daily with 28 days notice to 3 years with 3 months notice | Lock-up provisions range from none to 5 years |
| Absolute return . . . | 65,457 | 334,619 | 44,824 | 339,650 | Redemption terms range from 4 months with 30 days notice to closed-end funds which are not redeemable | Lock-up provisions range from none to not redeemable |
| Private | 232,650 | 629,042 | 269,612 | 545,295 | Closed-end funds not available for redemption | Not redeemable |
| Real estate | 133,612 | 273,468 | 135,912 | 311,942 | Closed-end funds not available for redemption | Not redeemable |
| Real assets | 30,602 | 133,386 | 37,447 | 176,446 | Redemption terms range from 8 months with 45 days notice for 1 fund with all other funds being closed-end and not redeemable | Not redeemable except for 1 fund with no lock-up provisions |
| Total | \$ 475,464 | \$ 2,684,382 | \$ 500,582 | \$ 2,434,519 | | |
| Postretirement Welfare Benefit Plan | | | | | | |
| Equity: | | | | | | |
| Domestic | \$ 48 | \$ 79,074 | \$ 114 | \$ 65,018 | Redemption terms range from 4 months with 30 days notice to 25 months with 3 months notice and 1 closed-end fund not available for redemption | Lock-up provisions range from none to 3 months; 1 fund is not redeemable |
| Foreign | 2,000 | 194,610 | 1,560 | 156,344 | Redemption terms range from 45 days with 10 days notice to 3 years with 3 months notice | Lock-up provisions range from none to 5 years |
| Absolute return . . . | 7,393 | 68,771 | 3,697 | 69,554 | Redemption terms range from 4 months with 30 days notice to closed-end funds which are not redeemable | Lock-up provisions range from none to not redeemable |
| Private | 30,742 | 48,593 | 33,669 | 32,032 | Closed-end funds not available for redemption | Not redeemable |
| Real estate | 16,083 | 20,362 | 13,722 | 20,677 | Closed-end funds not available for redemption | Not redeemable |
| Real assets | 3,889 | 3,763 | 4,675 | 6,032 | Closed-end funds not available for redemption | Not redeemable |
| Total | \$ 60,155 | \$ 415,173 | \$ 57,437 | \$ 349,657 | | |

J. Retirement Benefits (continued)

Target allocations and weighted-average asset allocations of the investment portfolio for the MIT defined benefit plan and postretirement welfare benefit plan at June 30, 2015 and 2014, are shown in Table 32.

| | Defined Benefit Plan | | | Postretirement Welfare Benefit Plan | | |
|-------------------------------------|------------------------|-------------|-------------|-------------------------------------|-------------|-------------|
| | 2015 Target Allocation | 2015 | 2014 | 2015 Target Allocation | 2015 | 2014 |
| Cash and cash equivalents | 0-10% | 6% | 10% | 0-10% | 3% | 7% |
| Fixed income | 3-13% | 9% | 8% | 10-20% | 13% | 16% |
| Equities | 35.5-75.5% | 63% | 55% | 38-78% | 66% | 58% |
| Marketable alternatives | 7.5-17.5% | 10% | 11% | 9.5-19.5% | 13% | 14% |
| Real assets | 3-13% | 4% | 6% | 0-7.5% | 1% | 1% |
| Real estate | 6-16% | 8% | 10% | 0-10% | 4% | 4% |
| Total | | 100% | 100% | | 100% | 100% |

Table 33 summarizes the notional exposure and net ending fair value of derivative financial instruments held by the MIT defined benefit plan at June 30, 2015 and 2014. Refer to Note C for a detailed discussion regarding derivative financial instruments.

| <i>(in thousands of dollars)</i> | Notional Exposure | | Net Ending Fair Value Amount | Net Gain (Loss) |
|---|-------------------|--------------------|------------------------------|--------------------|
| | Long | Short | | |
| Fiscal Year 2015 | | | | |
| Fixed income instruments: | | | | |
| Fixed income futures | \$ 2,500 | \$ (1,000) | \$ 13 | \$ (23) |
| Interest rate swaps | - | - | - | - |
| Total fixed income instruments | 2,500 | (1,000) | 13 | (23) |
| Commodity and index instruments: | | | | |
| Equity index swaps | - | (50,851) | 1,209 | (10,835) |
| Total commodity and index instruments | - | (50,851) | 1,209 | (10,835) |
| Credit instruments | - | - | - | - |
| 2015 Total | \$ 2,500 | \$ (51,851) | \$ 1,222 | \$ (10,858) |
| Fiscal Year 2014 | | | | |
| Fixed income instruments: | | | | |
| Fixed income futures | \$ 200 | \$ (4,700) | \$ 24 | \$ 73 |
| Interest rate swaps | - | - | - | - |
| Total fixed income instruments | 200 | (4,700) | 24 | 73 |
| Commodity and index instruments: | | | | |
| Equity index swaps | - | (23,573) | (1,265) | (89) |
| Total commodity and index instruments | - | (23,573) | (1,265) | (89) |
| Credit instruments | - | - | - | - |
| 2014 Total | \$ 200 | \$ (28,273) | \$ (1,241) | \$ (16) |

J. Retirement Benefits (continued)

Counterparty risk may be partially or completely mitigated through master netting agreements included within an International Swap and Derivatives Association, Inc. (“ISDA”) Master Agreement between the Plan and each of its counterparties. The ISDA Master Agreement allows the Plan to offset with the counterparty certain derivative instruments’ payables and/or receivables with collateral held with each counterparty.

To the extent amounts due from the counterparties are not fully collateralized contractually or otherwise, there is the risk of loss from counterparty non-performance. As of June 30, 2015, the Plan has elected not to offset recognized assets and liabilities in the Defined Benefit Plan Investments Table. The following tables, 34 and 35, summarize the effect that offsetting of recognized assets and liabilities could have in the Defined Benefit Plan Investments Table.

Table 34. Offsetting of Financial and Derivative Assets and Liabilities

| <i>(in thousands of dollars)</i> | 2015 | | | 2014 | | |
|--|-----------------|---|-------------------|-------------------|---|--------------|
| | Gross Amount | Cash/Treasury Collateral Posted/ (Received) | Net Amount | Gross Amount | Cash/Treasury Collateral Posted/ (Received) | Net Amount |
| Assets | | | | | | |
| Counterparty A | \$ 1,209 | \$ (2,950) | \$ (1,741) | \$ - | \$ - | \$ - |
| Total assets | <u>\$ 1,209</u> | <u>\$ (2,950)</u> | <u>\$ (1,741)</u> | <u>\$ -</u> | <u>\$ -</u> | <u>\$ -</u> |
| Liabilities | | | | | | |
| Counterparty A | \$ - | \$ - | \$ - | \$ (1,265) | \$ 1,330 | \$ 65 |
| Total liabilities | <u>-</u> | <u>-</u> | <u>-</u> | <u>(1,265)</u> | <u>1,330</u> | <u>65</u> |
| Total assets and liabilities, net . . | <u>\$ 1,209</u> | <u>\$ (2,950)</u> | <u>\$ (1,741)</u> | <u>\$ (1,265)</u> | <u>\$ 1,330</u> | <u>\$ 65</u> |

Maximum risk of loss from counterparty credit risk on over-the-counter derivatives is generally the aggregate unrealized appreciation in excess of any collateral pledged by the counterparty. ISDA Master Agreements allow the Plan or the counterparties to an over-the-counter derivative to terminate the contract prior to maturity in the event either party fails to

meet the terms in the ISDA Master Agreements. This would cause an accelerated payment of net liability, if any owed to the counterparty.

Table 35 below reconciles the net recognized assets and liabilities, as shown in Table 34, to derivative financial instruments as shown in Table 29A.

Table 35. Reconciliation of Financial and Derivative Assets and Liabilities

| <i>(in thousands of dollars)</i> | 2015 | 2014 |
|--------------------------------------|-----------------|-------------------|
| Derivatives from Table 29A | \$ 1,222 | \$ (1,241) |
| Fixed income futures | (13) | (24) |
| Total | <u>\$ 1,209</u> | <u>\$ (1,265)</u> |

J. Retirement Benefits (continued)

Expected Future Benefit Payments

In 2016, MIT expects to make contributions of \$21.9 million and \$23.2 million to its defined benefit pension plan and post-retirement welfare benefit plan, respectively. These contributions have been estimated based on the same assumptions used to measure MIT's benefit obligations at June 30, 2015.

Table 36 reflects total expected benefit payments for the defined benefit and postretirement welfare benefit plans. These payments have been estimated based on the same assumptions used to measure MIT's benefit obligations at June 30, 2015.

| <i>(in thousands of dollars)</i> | Pension Benefits | Other Benefits* |
|----------------------------------|---------------------|--------------------|
| 2016 | \$ 144,557 | \$ 25,230 |
| 2017 | 151,687 | 27,342 |
| 2018 | 156,611 | 29,084 |
| 2019 | 162,670 | 30,511 |
| 2020 | 169,197 | 31,857 |
| 2021–2025 | 945,966 | 182,062 |

* Other benefits reflect the total net benefits expected to be paid from the plans (e.g., gross benefit reimbursement offset by retiree contributions).

K. Components of Net Assets and Endowment

Table 37 presents the total net assets composition as of June 30, 2015. The amounts listed in the unrestricted category under endowment funds are those gifts and other funds received over the years that MIT designated as funds functioning as

endowment and invested with the endowment funds. A large component of temporarily restricted net assets in other invested funds is pledges, the majority of which will be reclassified to unrestricted net assets when cash is received.

| <i>(in thousands of dollars)</i> | 2015 | | | | 2014 Total |
|---|---------------------|------------------------|------------------------|----------------------|----------------------|
| | Unrestricted | Temporarily Restricted | Permanently Restricted | Total | |
| Endowment funds | | | | | |
| General purpose | \$ 900,984 | \$ 1,115,371 | \$ 227,474 | \$ 2,243,829 | \$ 2,067,894 |
| Departments and research | 625,386 | 1,096,170 | 609,789 | 2,331,345 | 2,114,376 |
| Library | 12,077 | 24,660 | 15,073 | 51,810 | 45,792 |
| Salaries and wages | 549,714 | 2,696,320 | 684,765 | 3,930,799 | 3,630,002 |
| Graduate general | 89,489 | 156,713 | 98,159 | 344,361 | 314,380 |
| Graduate departments | 120,290 | 372,942 | 250,894 | 744,126 | 659,938 |
| Undergraduate | 225,798 | 1,143,805 | 355,383 | 1,724,986 | 1,580,124 |
| Prizes | 8,754 | 32,580 | 20,551 | 61,885 | 57,016 |
| Miscellaneous | 1,133,931 | 251,230 | 279,334 | 1,664,495 | 1,606,546 |
| Investment income held for distribution | 377,107 | - | - | 377,107 | 349,063 |
| Endowment funds before pledges | 4,043,530 | 6,889,791 | 2,541,422 | 13,474,743 | 12,425,131 |
| Pledges | - | - | 213,196 | 213,196 | 164,647 |
| Total endowment funds | 4,043,530 | 6,889,791 | 2,754,618 | 13,687,939 | 12,589,778 |
| Other Invested Funds | | | | | |
| Student loan funds | 20,052 | - | 18,262 | 38,314 | 37,842 |
| Building funds | 49,111 | 54,879 | - | 103,990 | 134,092 |
| Designated purposes: | | | | | |
| Departments and research | 355,371 | - | - | 355,371 | 304,097 |
| Other purposes | 415,061 | 45,203 | - | 460,264 | 496,317 |
| Life income funds | 6,022 | 31,917 | 108,988 | 146,927 | 158,043 |
| Pledges | - | 344,899 | - | 344,899 | 325,688 |
| Other funds available for current expenses | 1,485,072 | 186,758 | - | 1,671,830 | 1,364,418 |
| Funds expended for educational plant | 697,039 | - | - | 697,039 | 617,392 |
| Total other invested funds | 3,027,728 | 663,656 | 127,250 | 3,818,634 | 3,437,889 |
| Noncontrolling interests | 232,415 | - | - | 232,415 | 287,825 |
| Total net assets at fair value | \$ 7,303,673 | \$ 7,553,447 | \$ 2,881,868 | \$ 17,738,988 | \$ 16,315,492 |

K. Components of Net Assets and Endowment (continued)

MIT's endowment consists of approximately 3,800 individual funds established for a variety of purposes and includes both donor-restricted endowment funds and funds designated by the Executive Committee of the MIT Corporation (Executive Committee) to function as endowments. As required by GAAP, net assets associated with endowment funds, including funds designated by the Executive Committee to function as endowments, are classified and reported based on the existence or absence of donor-imposed restrictions.

The Executive Committee has interpreted the Massachusetts-enacted version of the Uniform Prudent Management of Institutional Funds Act (UPMIFA) as allowing MIT to appropriate for expenditure or accumulate so much of an endowment fund as MIT determines is prudent for the uses, benefits, purposes, and duration for which the endowment fund is established, subject to the intent of the donor as expressed in the gift instrument. Unless stated otherwise in the gift instrument, the assets in an endowment fund shall be donor-restricted assets until appropriated for expenditure by

the Executive Committee. As a result of this interpretation, MIT has not changed the way permanently restricted net assets are classified. (See Note A for further information on net asset classification.) The remaining portion of the donor-restricted endowment fund that is not classified in permanently restricted net assets is classified as temporarily restricted net assets until those amounts are appropriated for expenditure in a manner consistent with the standard of prudence prescribed by UPMIFA. In accordance with UPMIFA, the Executive Committee considers the following factors in making a determination to appropriate or accumulate endowment funds:

- i. the duration and preservation of the fund
- ii. the purposes of MIT and the endowment fund
- iii. general economic conditions
- iv. the possible effects of inflation and deflation
- v. the expected total return from income and the appreciation of investments
- vi. other resources of MIT
- vii. the investment policies of MIT

Table 38. Endowment Net Asset Composition by Type of Fund

| <i>(in thousands of dollars)</i> | Unrestricted | Temporarily Restricted | Permanently Restricted | Total |
|--|----------------------------|----------------------------|----------------------------|-----------------------------|
| Fiscal Year 2015 | | | | |
| Donor-restricted endowment funds | \$ - | \$ 6,889,791 | \$ 2,754,618 | \$ 9,644,409 |
| Board-designated endowment funds | 4,043,530 | - | - | 4,043,530 |
| Total endowment funds | <u>\$ 4,043,530</u> | <u>\$ 6,889,791</u> | <u>\$ 2,754,618</u> | <u>\$ 13,687,939</u> |
| Fiscal Year 2014 | | | | |
| Donor-restricted endowment funds | \$ - | \$ 6,169,847 | \$ 2,710,357 | \$ 8,880,204 |
| Board-designated endowment funds | 3,709,574 | - | - | 3,709,574 |
| Total endowment funds | <u>\$ 3,709,574</u> | <u>\$ 6,169,847</u> | <u>\$ 2,710,357</u> | <u>\$ 12,589,778</u> |

Underwater Endowment Funds

From time to time, the fair value of assets associated with individual donor-restricted endowment funds may fall below the value of the initial and subsequent donor gift amounts (underwater). When underwater endowment funds exist, they are classified as a reduction of unrestricted net assets. There were no underwater endowment funds reported in unrestricted net assets as of June 30, 2015 and June 30, 2014.

K. Components of Net Assets and Endowment (continued)

Table 39. Changes in Endowment Net Assets

| <i>(in thousands of dollars)</i> | Unrestricted | Temporarily Restricted | Permanently Restricted | Total |
|--|----------------------------|----------------------------|----------------------------|-----------------------------|
| Fiscal Year 2015 | | | | |
| Endowment net assets, July 1, 2014 | \$ 3,709,574 | \$ 6,169,847 | \$ 2,710,357 | \$ 12,589,778 |
| Investment return: | | | | |
| Investment income | 29,346 | 63,752 | 7,738 | 100,836 |
| Net appreciation (realized and unrealized) | 448,256 | 1,029,171 | (100,887) | 1,376,540 |
| Total investment return | 477,602 | 1,092,923 | (93,149) | 1,477,376 |
| Contributions | - | - | 88,376 | 88,376 |
| Appropriation of endowment assets for expenditure | (165,768) | (375,259) | (4,834) | (545,861) |
| Other changes: | | | | |
| Underwater gain adjustment | - | - | - | - |
| Net asset reclassifications and transfers to create board-designated endowment funds | 22,122 | 2,280 | 53,868 | 78,270 |
| Endowment net assets, June 30, 2015 | <u>\$ 4,043,530</u> | <u>\$ 6,889,791</u> | <u>\$ 2,754,618</u> | <u>\$ 13,687,939</u> |
| Fiscal Year 2014 | | | | |
| Endowment net assets, July 1, 2013 | \$ 3,228,902 | \$ 5,171,454 | \$ 2,605,576 | \$ 11,005,932 |
| Investment return: | | | | |
| Investment income | 26,120 | 51,051 | 17,590 | 94,761 |
| Net appreciation (realized and unrealized) | 576,974 | 1,294,684 | (59,564) | 1,812,094 |
| Total investment return | 603,094 | 1,345,735 | (41,974) | 1,906,855 |
| Contributions | - | - | 117,208 | 117,208 |
| Appropriation of endowment assets for expenditure | (158,367) | (346,848) | (10,216) | (515,431) |
| Other changes: | | | | |
| Underwater gain adjustment | 1,191 | (1,191) | - | - |
| Net asset reclassifications and transfers to create board-designated endowment funds | 34,754 | 697 | 39,763 | 75,214 |
| Endowment net assets, June 30, 2014 | <u>\$ 3,709,574</u> | <u>\$ 6,169,847</u> | <u>\$ 2,710,357</u> | <u>\$ 12,589,778</u> |

K. Components of Net Assets and Endowment (continued)

Investment and Spending Policies

MIT maintains its investments primarily in two investment pools: Pool A, principally for endowment and funds functioning as endowment, and Pool C, principally for investment of current funds of MIT's schools and departments and MIT's operating funds. Pool A operates as a mutual fund with units purchased and redeemed based on the previous month's unit market value of Pool A. The total market value of Pool A was \$14,957.1 million at June 30, 2015 and \$13,654.9 million at June 30, 2014. Pool A includes certain operating and life income funds totaling \$1,652.2 million at June 30, 2015 and \$1,512.6 million at June 30, 2014. Certain assets are also maintained in separately invested funds. Separately invested funds totaled \$176.3 million at June 30, 2015 and \$282.8 million at June 30, 2014.

MIT has adopted endowment investment and spending policies designed to provide a predictable stream of funding to programs supported by its endowment while maintaining the purchasing power of endowment assets. An additional investment goal is to maximize return relative to appropriate risk such that performance exceeds appropriate benchmark returns at the total pool, asset class, and individual manager levels.

To achieve its long-term rate-of-return objectives, MIT relies on a total return strategy in which investment returns are realized through both capital appreciation (realized and unrealized gains) and current yield (interest and dividends). MIT targets a diversified asset allocation that places greater emphasis on equity-based investments to achieve its long-term objectives within prudent risk constraints.

The Executive Committee of the Corporation votes to distribute funds for operational support from general investments. In accordance with MIT's spending policy, these distributions are funded from both investment income and market appreciation. The distribution rates were \$65.33 and \$62.90 per Pool A unit as of June 30, 2015 and 2014, respectively. In 2015, the amount distributed for spending from Pool A and Pool C totaled \$670.3 million, compared to \$623.5 million distributed in 2014. Included in this amount was a special distribution of \$34.7 million and \$31.1 million from gains in Pool C in 2015 and 2014, respectively. During 2015, distributions from separately invested funds were \$5.5 million, compared to \$10.9 million in 2014. The income earned in Pool C, or currently invested funds, was fully distributed.

SECTION II

**SCHEDULE OF EXPENDITURES OF FEDERAL
AWARDS**

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Massachusetts Institute of Technology
Schedule of Expenditures of Federal Awards
For the Year Ended June 30, 2015

| Federal Grantor/ Pass Through Grantor/ Program Title | Federal CFDA Number | Federal Expenditures |
|--|---------------------------|-------------------------|
| Research and Development | | |
| U.S. Department of Defense: | 12 | |
| Air Force | | \$ 267,402,148 |
| Army | | 86,342,854 |
| Classified | | 145,054,450 |
| Defense Advance Research Project Agency | | 57,511,552 |
| Missile Defense Agency | | 85,884,414 |
| National Security Agency | | 10,704,720 |
| Navy | | 91,286,578 |
| Other DOD | | 163,368,713 |
| Passthrough | | 30,536,098 |
| Total Department of Defense | | <u>\$ 938,091,527</u> |
| U.S. Department of Energy | 81 | \$ 67,776,603 |
| U.S. Department of Energy - Passthrough | 81 | 14,286,461 |
| U.S. Department of Health and Human Services | 93 | 124,433,772 |
| U.S. Department of Health and Human Services - Passthrough | 93 | 18,807,515 |
| Federal Aviation Administration | 20 | 29,452,089 |
| Miscellaneous Federal Government** | Various | 12,450,876 |
| Miscellaneous Federal Government - Passthrough | Various | 3,782,362 |
| National Aeronautics & Space Administration | 43 | 47,797,924 |
| National Aeronautics & Space Administration - Passthrough | 43 | 9,873,269 |
| National Oceanic & Atmospheric Administration | 11 | 5,390,924 |
| National Science Foundation | 47 | 79,511,576 |
| National Science Foundation - Passthrough | 47 | 17,094,710 |
| Total Research and Development* | Appendix A | <u>\$ 1,368,749,608</u> |

* These programs include ARRA expenditures, which are detailed in Appendix A, B, and C.

** Includes Department of Education

The accompanying notes are an integral part of this schedule.

| Federal Grantor/ Pass Through Grantor/ Program Title | Federal CFDA Number | Federal Expenditures |
|---|---------------------------|-------------------------|
| Student Financial Assistance Cluster Expenditures | | |
| U.S. Department of Education Cluster: | | |
| Grants: | | |
| Pell | 84.063 | \$ 3,508,904 |
| Federal Supplemental Educational Opportunity | 84.007 | 1,875,059 |
| Federal Work Study | 84.033 | 1,738,099 |
| Federal Perkins Loan: | 84.038 | |
| New Loans | | 5,700,817 |
| Balance Outstanding From Prior Years | | 30,048,972 |
| Loan Administrative Cost Allowance | | 420,510 |
| William D. Ford Federal Direct Loan Program: | 84.268 | |
| Direct Subsidized and Unsubsidized Loans | | 10,501,504 |
| Direct Plus Loan for Parents and for Graduate or Professional Students | | 6,802,862 |
| Total Student Financial Assistance Cluster Expenditures | | <u>\$ 60,596,727</u> |
| Other Federal Expenditures: | | |
| Department of Defense | Appendix B | \$ 254,552 |
| Department of Defense - Passthrough | Appendix C | 5,210,223 |
| Department of Energy | Appendix B | 325,194 |
| Department of Energy - Passthrough | Appendix C | 211,989 |
| Miscellaneous Federal Government | Appendix B | 3,430,850 |
| Miscellaneous Federal Government - Passthrough | Appendix C | 453,969 |
| National Aeronautics & Space Administration | Appendix B | 2,102,562 |
| National Aeronautics & Space Administration - Passthrough | Appendix C | 742,037 |
| Total Other Federal Expenditures | | <u>\$ 12,731,376</u> |
| Total Federal Expenditures | | <u>\$ 1,442,077,711</u> |

The accompanying notes are an integral part of this schedule.

Massachusetts Institute of Technology

Notes to Schedule of Expenditures of Federal Awards

June 30, 2015

1. Basis of Presentation

The accompanying schedule of expenditures of federal awards including appendices A, B and C (the "Schedule") summarize the expenditures of the Massachusetts Institute of Technology (the "Institute") under programs of the federal government for the year ended June 30, 2015.

Because the Schedule presents only a selected portion of the activities of the Institute, it is not intended to and does not present the financial position, changes in net assets and cash flows of the Institute. The accompanying appendices A, B, and C provide detail on the federal awards expended by the Institute.

For purposes of the Schedule, federal awards include all grants, contracts and similar agreements entered into directly between the Institute and agencies and departments of the federal government and all subawards to the Institute by nonfederal organizations pursuant to federal grants, contracts and similar agreements. The information in this schedule is presented in accordance with the provisions of Office of Management and Budget Circular A-133, *Audits of States, Local Governments, and Nonprofit Organizations*. Therefore, certain amounts presented in the Schedule may differ from amounts presented in, or used in preparation of, the consolidated financial statements. CFDA and pass-through numbers are provided when available. Negative amounts represent adjustments to amounts reported in prior years in the normal course of business.

2. Summary of Significant Accounting Policies for Federal Expenditures

Expenditures for direct costs are recognized as incurred using the accrual method of accounting and the cost accounting principles contained in OMB Circular A-21, *Cost Principles for Educational Institutions*, and OMB's Uniform Guidance. Under those cost principles, certain types of expenditures are not allowable or are limited as to reimbursement. Moreover, expenditures include a portion of costs associated with general Institute activities (facilities and administrative costs) which are allocated to awards under negotiated formulas commonly referred to as facilities and administrative rates.

The Institute receives funding from federal government agencies for sponsored research under government grants and contracts. These grants and contracts provide for reimbursement of indirect costs based on rates negotiated with the Office of Naval Research (ONR), the Institute's cognizant federal agency. The Institute's indirect cost reimbursements are based on fixed rates with carryforward of under or over recoveries.

The Defense Contract Audit Agency (DCAA) is responsible for auditing indirect charges to grants and contracts. The Institute has final audited rates through 2009 and negotiated fixed rates for indirect costs through the 2015 fiscal year.

3. Federal Student Loan Programs

The Federal Perkins Loan Program (CFDA #84.038) is administered directly by the Institute and balances and transactions relating to this program are included in the Institute's consolidated financial statements.

Massachusetts Institute of Technology
Notes to Schedule of Expenditures of Federal Awards
June 30, 2015

The William D. Ford Federal Direct Loan Programs (CFDA #84.268) are not administered by the Institute and balances and transactions relating to these programs are not included in the Institute's consolidated financial statements.

4. Subrecipients

In the Research and Development cluster (Appendix A-1, Appendix A-2 and Appendix A-3), a total of \$123,732,187 was passed-on to subrecipients.

For other programs (Appendix B and Appendix C), a total of \$947,715 was passed-on to subrecipients.

| Project Name | CFDA | Amount Passed to Subrecipients |
|---------------------|-------------|---------------------------------------|
| Cite And Idin | 98.001 | \$ 947,715 |

Appendix A - Summary
Massachusetts Institute of Technology
Schedule of Expenditures of Federal Awards
Federal Research Support
FY 15 Expenditures

| <u>Sponsor</u> | <u>Campus Direct</u> (Appendix A-1) | <u>Lincoln Direct</u> (Appendix A-2) | <u>Lincoln Passthrough</u> (Appendix A-2) | <u>Campus Passthrough</u> (Appendix A-3) | <u>Total</u> |
|--|--|---|--|---|-------------------------|
| <u>Department of Defense:</u> | | | | | |
| Air Force | \$ 19,477,246 | \$ 247,924,902 | - | - | 267,402,148 |
| Army | 33,729,714 | 52,613,140 | - | - | 86,342,854 |
| Classified | - | 145,054,450 | - | - | 145,054,450 |
| Defense Advanced Research Project Agency | 7,970,676 | 49,540,876 | - | - | 57,511,552 |
| Missile Defense Agency | - | 85,884,414 | - | - | 85,884,414 |
| National Security Agency | - | 10,704,720 | - | - | 10,704,720 |
| Navy | 32,941,404 | 58,345,174 | - | - | 91,286,578 |
| Other Department of Defense | 2,813,753 | 160,554,960 | - | - | 163,368,713 |
| Passthrough | - | - | 748,121 | 29,787,977 | 30,536,098 |
| Total Department of Defense | 96,932,793 | 810,622,636 | 748,121 | 29,787,977 | 938,091,527 |
| Department of Energy | 67,248,549 | 528,054 | 6,711 | 14,279,750 | 82,063,064 |
| Department of Health & Human Services | 100,178,583 | 24,255,189 | - | 18,807,515 | 143,241,287 |
| Federal Aviation Administration | - | 29,452,089 | - | - | 29,452,089 |
| <u>Miscellaneous Federal Government:</u> | | | | | |
| Department of Agriculture | 52,928 | - | - | - | 52,928 |
| Department of Commerce | 1,816,245 | - | - | 236,800 | 2,053,045 |
| Department of Education | 446,854 | - | - | - | 446,854 |
| Department of Interior | 24,584 | - | - | 34,500 | 59,084 |
| Department of Transportation | 4,477,072 | - | - | 726,682 | 5,203,753 |
| Other | 4,429,329 | 1,203,864 | 461,370 | 2,323,010 | 8,417,574 |
| Total Miscellaneous Federal Government | 11,247,012 | 1,203,864 | 461,370 | 3,320,991 | 16,233,238 |
| Nat'l Aeronautics & Space Administration | 33,079,896 | 14,718,028 | 1,213,473 | 8,659,796 | 57,671,193 |
| Nat'l Oceanic & Atmospheric Administration | - | 5,390,924 | - | - | 5,390,924 |
| National Science Foundation | 79,511,576 | - | 338,594 | 16,756,116 | 96,606,286 |
| Total Federal Sponsors | \$ 388,198,409 | \$ 886,170,784 | \$ 2,768,269 | \$ 91,612,145 | \$ 1,368,749,608 |

Note for Appendices A-1, A-3, B and C details: - Contracts without CFDA numbers were shown as ".CCC" in the CFDA# column.

- Amounts less than 50 cents appear as zero due to rounding

Appendix A1
Massachusetts Institute of Technology
Federal Research Support - On Campus
FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|------------------------------|----------------------------|--|--------|-------------|
| DEPARTMENT OF DEFENSE | | | | |
| Air Force | | | | |
| Air Force | FA2386-10-1-4135 | Intelligence in the Now: Robust Intelligence in Complex Domains | 12.800 | 135,296 |
| Air Force | FA2386-12-1-3029 | A DURIP Instrument to Characterize Water-Splitting Catalysts to Enable Lightweight, Highly Portable and Autonomous Energy Generation | 12.800 | 54,728 |
| Air Force | FA2386-13-1-3010 | High Voltage Electron Gun and High Power Microwave System | 12.800 | 198,752 |
| Air Force | FA2386-14-1-4067 | Micro- and nano-structured materials for fluid and ion transport for miniaturized applications | 12.800 | 3,618 |
| Air Force | FA8650-11-1-7154 | Nonparametric Representations for Integrated Inference, Central, and Sensing | 12.910 | 657,420 |
| Air Force | FA8650-14-C-2472 | Computational Aircraft Prototype Syntheses (CAPS) | 12.CCC | 385,515 |
| Air Force | FA8651-13-1-0002 | Dynamic Decision-Making and Coordination of Humans and Autonomous Agents Under Communication and Information Uncertainty | 12.800 | 95,969 |
| Air Force | FA8750-11-2-0225 | Computing on Encrypted Data: Theory and Applications | 12.300 | 378,925 |
| Air Force | FA8750-12-1-0321 | Assisted Perception, Planning and Control for Remote Mobility and Dexterous Manipulation | 12.300 | 678,713 |
| Air Force | FA8750-12-2-0110 | Provably Safe Android Apps | 12.800 | 1,679,024 |
| Air Force | FA8750-14-2-0004 | A General-Purpose Probabilistic Programming Platform with Effective Stochastic Interference | 12.300 | 1,416,808 |
| Air Force | FA8750-14-2-0120 | Programmable Quantum Photonic Processor using Silicon Photonics | 12.300 | 396,344 |
| Air Force | FA8750-14-2-0242 | CLIC: A Digital Code Assistant for Big Code Era | 12.300 | 363,742 |
| Air Force | FA8750-15-1-0034 | New Frontiers in Networking with Emphasis on Defense Applications | 12.300 | 108,402 |
| Air Force | FA9453-13-C-0279 | Improved Multiple-Event Location Methods for Ground-Truth Collection | 12.CCC | 230,920 |
| Air Force | FA9550-09-1-0363 | Overmoded W-Band Traveling Wave Tube Amplifier | 12.800 | 13,628 |
| Air Force | FA9550-09-1-0700 | (Energy Harvesting)-Environmental Hydrocarbon Harvesting for Micro-scale Power | 12.800 | 11,245 |
| Air Force | FA9550-10-1-0551 | Advanced Technologies for Structural and Functional Optical Coherence Tomography | 12.630 | 268,031 |
| Air Force | FA9550-11-1-0011 | PECASE Quantum Engineering of Strongly Correlated Matter with Ultracold Fermi Gases | 12.630 | 202,794 |

Appendix A1
Massachusetts Institute of Technology
Federal Research Support - On Campus
FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| Air Force | FA9550-11-1-0059 | Advanced Nanostructures for Two-Phase Fluid and Thermal Transport | 12.800 | 727 |
| Air Force | FA9550-11-1-0134 | Distributed Hybrid Information and Plan Consensus HIPC for Semi-autonomous UAV Teams | 12.800 | 125,804 |
| Air Force | FA9550-11-1-0141 | Design Optimizations Simulation of Wave Propagation in Metamaterials | 12.800 | -62 |
| Air Force | FA9550-11-1-0150 | An Optimization Framework for Air Force Logistics Models | 12.800 | -3,584 |
| Air Force | FA9550-11-1-0168 | Lossy Information Exchange and Instantaneous Communication | 12.800 | 222,585 |
| Air Force | FA9550-11-1-0174 | THERMAL REGULATION OF HEAT TRANSFER PROCESSES | 12.800 | 6,094 |
| Air Force | FA9550-11-1-0183 | Stateless Networking: Principles, Architectures and Codes | 12.800 | 238,446 |
| Air Force | FA9550-11-1-0195 | Plasma-Materials Interactions in Electric Propulsion | 12.800 | 406,010 |
| Air Force | FA9550-11-1-0199 | Tu(r)ning Weakness to Strength: Mechanomutable Bioinspired Materials | 12.800 | 241,432 |
| Air Force | FA9550-11-1-0225 | Quantum Transport and Optoelectronics in Gapped Graphene Nanodevices | 12.800 | 137,735 |
| Air Force | FA9550-11-1-0305 | Statistical Models and Graph: Deconvolution via Incoherence | 12.800 | 196,306 |
| Air Force | FA9550-11-1-0312 | The Value of Information in Distributed Decision Networks | 12.800 | 176,246 |
| Air Force | FA9550-11-1-0339 | Dynamic Data Driven Methods for Self-aware Aerospace Vehicles | 12.800 | 226,908 |
| Air Force | FA9550-12-1-0080 | Phase-Sensitive Control of Molecular Dissociation Through Attosecond Pump/Strong-Field mid-IR Probe Spectroscopy | 12.800 | 266,753 |
| Air Force | FA9550-12-1-0129 | Quantitative Analysis, Design, and Fabrication of Biosensing and Bioprocessing Devices in Living Cells | 12.800 | 213,555 |
| Air Force | FA9550-12-1-0259 | Thin Film Self-Assembly of Globular Protein-Polymer Diblock Copolymers for Nanostructured Biofunctional Materials | 12.800 | 117,317 |
| Air Force | FA9550-12-1-0287 | Statistical, Graphical, and Learning Methods for Sensing, Surveillance, and Navigation Systems | 12.800 | 147,837 |
| Air Force | FA9550-12-1-0292 | YIP: Modular Paradigm for Scalable Quantum Information | 12.800 | 126,800 |
| Air Force | FA9550-12-1-0313 | Fluid SLAM and the Robotic Reconstruction of Localized Atmospheric Phenomena | 12.800 | 166,297 |
| Air Force | FA9550-12-1-0328 | Air Force Fiscal Year 2012 Young Investigator Research Program | 12.800 | 115,738 |
| Air Force | FA9550-12-1-0348 | Robust Coordination of Autonomous Systems through Risk-sensitive, Model-based Programming and Execution | 12.800 | 225,268 |
| Air Force | FA9550-12-1-0357 | Hybridized Multiscale Discontinuous Galerkin Methods for Multiphysics | 12.800 | 206,562 |
| Air Force | FA9550-12-1-0420 | Model-based optimal experimental design for complex physical systems | 12.800 | 236,097 |

Appendix A1
Massachusetts Institute of Technology
Federal Research Support - On Campus
FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| Air Force | FA9550-12-1-0423 | Efficient Algorithmic Frameworks via Structural Graph Theory | 12.910 | 393,654 |
| Air Force | FA9550-12-1-0499 | Advanced Photonics: Science, Technologies and Applications | 12.800 | 248,704 |
| Air Force | FA9550-13-1-0023 | Coding instead of splitting - algebraic combinations in time and space | 12.800 | 293,524 |
| Air Force | FA9550-13-1-0042 | A Comprehensive Theory of Algorithms for Wireless Networks and Mobile Systems | 12.800 | 98,701 |
| Air Force | FA9550-13-1-0065 | Automated Discovery of New Chemical Reactions and Accurate Calculation of Their Rates | 12.800 | 146,532 |
| Air Force | FA9550-13-1-0099 | GEO Satellites as Space Weather Sensors | 12.800 | 127,340 |
| Air Force | FA9550-13-1-0159 | High-Energy, Multi-Octave-Spanning Mid-IR Sources via Adiabatic Difference Frequency Generation | 12.800 | 219 |
| Air Force | FA9550-13-1-0193 | Quantum Optics in Diamond Nanophotonic Chips | 12.800 | 250,964 |
| Air Force | FA9550-14-1-0031 | Categorical approach to agent interaction | 12.800 | 245,489 |
| Air Force | FA9550-14-1-0035 | Advanced Quantum Material - A New Frontier for Ultracold Atoms | 12.800 | 2,115,299 |
| Air Force | FA9550-14-1-0052 | Optimal Measurements for Scalable Quantum Technologies | 12.800 | 2,492,591 |
| Air Force | FA9550-14-1-0060 | (BRI FY14) Theory-based Engineering of Biomolecular Circuits in Living Cells | 12.800 | 515,283 |
| Air Force | FA9550-14-1-0192 | Constraining ICME Magnetic Field Orientations using Low Frequency Radio Polarimetric Observations | 12.800 | 203,663 |
| Air Force | FA9550-14-1-0226 | Design and Synthesis of Polymers for Electrooptical Applications | 12.800 | 212,264 |
| Air Force | FA9550-14-1-0255 | Isolated Soft-X-ray Attosecond Pulse Generation Using Synthesized Strong-Field Infrared Pulses | 12.800 | 186,473 |
| Air Force | FA9550-14-1-0292 | Synthesis and Self-Assembly of Tri- and Tetra-block Bottlebrush Copolymers | 12.800 | 82,499 |
| Air Force | FA9550-14-1-0399 | Dynamic Data-Driven Motion Planning and Control for Pervasive Situational Awareness Application Systems | 12.800 | 199,555 |
| Air Force | FA9550-14-1-0403 | Network Coding for Strong Consistency Semantics in Distributed Shared Memory Networks | 12.800 | 91,377 |
| Air Force | FA9550-15-1-0038 | (MURI 14)-A unified mathematical and algorithmic framework for managing multiple information sources of multi-physics systems | 12.800 | 223,692 |
| Air Force | FA9550-15-1-0046 | Toward a Phenomenological Theory of Transport Phenomena in Molten Sulfide Systems | 12.800 | 41,450 |
| Air Force | FA9550-15-1-0058 | VOLUME MODE TRAVELING WAVE TUBE AMPLIFIER | 12.800 | 38,481 |
| Air Force | FA9550-15-1-0072 | Gradient based optimization and control of chaotic multidisciplinary systems via Least Squares Shadowing adjoint method | 12.800 | 89,704 |
| Air Force | FA9550-15-1-0078 | Interferometric inversion for passive imaging and navigation | 12.800 | 94,505 |

Appendix A1
Massachusetts Institute of Technology
Federal Research Support - On Campus
FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------------|
| Air Force | FA9550-15-1-0135 | Molecular Tuning of Interfacial Electrocatalysis | 12.800 | 8,538 |
| Army | | Total for Air Force | | 19,477,246 |
| Army | D12AP00077 | Neurobiology of Narrative Influence in Inter-group Conflict | 12.910 | 205,899 |
| Army | D12AP00210 | Modeling and Shaping Narrative Influence | 12.910 | 8,560 |
| Army | D13AP00008 | Assessing and Monitoring Subtle and Cognitive Markers | 12.910 | 47,741 |
| Army | D13AP00025 | Enabling Novel Chassis for Synthetic Biology via Rapid Field Assisted Genetic Transformation | 12.910 | 210,876 |
| Army | D13AP00045 | Nanoparticle-Enabled Sensitivity of Specific Neurons to Alternating Magnetic Fields for Targeted Transcranial Magnetic Stimulation | 12.910 | 253,927 |
| Army | D13AP00048 | A Disaster Response Robot Capable of Power Manipulation | 12.910 | 242,123 |
| Army | D13AP00050 | Time, Energy and Momentum Resolved Probing of Ultrafast Dynamics in Quantum Materials | 12.910 | 352,007 |
| Army | D14AP00001 | Harnessing Top-Down Systems Modeling and Simulation to Provide Context for Narratives | 12.910 | 67,812 |
| Army | W31P4Q-12-1-0019 | Quantum Secured Communications (QuSecComm) | 12.910 | 390,289 |
| Army | W31P4Q-13-1-0013 | Hydraulic Actuation for Micro-Scale Robots (HAMR) | 12.910 | 443,882 |
| Army | W31P4Q-13-1-0014 | HERMES : Highly Efficient Robotic Mechanisms and Electromagnetic systems | 12.910 | 933,533 |
| Army | W81XWH-09-2-0143 | Prosthetic knee-ankle-foot system with biomechatronic sensing, control, and power generation | 12.420 | -47,232 |
| Army | W81XWH-11-2-0179 | PT100120: Using Real-Time Functional Imaging to Speed Recovery from TBI | 12.420 | 314,837 |
| Army | W81XWH-12-1-0432 | Investigating the mechanism of K-RAS independent growth of murine pancreatic ductal adenocarcinoma in vitro and in vivo. | 12.420 | 25,673 |
| Army | W81XWH-12-2-0016 | Post-Traumatic Stress Innovations: U.S. Military Enterprise Analysis | 12.420 | 1,847,146 |
| Army | W81XWH-13-1-0151 | Nano-siRNA Particles and Combination Therapies for Ovarian Tumor Targeting | 12.420 | 830,840 |
| Army | W81XWH-13-1-0272 | PC121018P1 Targeted Encapsulation and Internal Focusing for Circulating Tumor Cell Isolation | 12.420 | 227,624 |
| Army | W81XWH-13-1-0323 | Developing Novel Therapeutic Approaches in small cell lung carcinoma using genetically engineered mouse models and human circulating tumor cells. | 12.420 | 305,257 |
| Army | W81XWH-14-1-0240 | Extracellular Matrix Biomarkers for Diagnosis, Prognosis, Imaging and Targeting | 12.420 | 643,337 |
| Army | W81XWH-14-1-0544 | Cartilage-Penetrating Chondrogenic Nanoparticles for Early Post-Traumatic Osteoarthritis Therapy | 12.420 | 203,489 |

Appendix A1
Massachusetts Institute of Technology
Federal Research Support - On Campus
FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| Army | W81XWH-14-C-0111 | Prosthetic Knee-Angle-Foot System with Biomechatronic Sensing, Control and Power Generation | 12.CCC | 791,044 |
| Army | W81XWH-15-1-0095 | OC140365 Investigate the role of obesity in ovarian cancer initiation and progression | 12.42 | 35,909 |
| Army | W911NF-07-1-0493 | Quantum Emulations of New Materials Using Ultracold Atoms | 12.431 | 33,689 |
| Army | W911NF-07-D-0004 | Institute for Soldier Nanotechnologies | 12.CCC | 5,059 |
| Army | W911NF-07-D-0004, T.O. 9 | Institute for Soldier Nanotechnologies | 12.CCC | 9,367 |
| Army | W911NF-10-1-0059 | New Treatments for Stress-induced Dysregulation of Circuits Regulating Reward, Fear and Habit Learning | 12.431 | 1,974,677 |
| Army | W911NF-10-1-0088 | Asymmetric Multilevel Outphasing (AMO): A New Architecture for All-Silicon mm-Wave Transmitter ICs | 12.431 | 30,460 |
| Army | W911NF-11-1-0202 | Optical-Transition Clocks With Microfabricated Frequency Combs For Performance Beyond the Standard Quantum Limit | 12.431 | 1,558,429 |
| Army | W911NF-11-1-0281 | Biologically Patterned Amyloid Scaffolds for Multifunctional and Multiscale Materials | 12.431 | 59,710 |
| Army | W911NF-11-1-0331 | Identification and Manipulation of Novel Topological Phases | 12.431 | 171,420 |
| Army | W911NF-11-1-0400 | Multi-Qubit Enhanced Sensing and Metrology | 12.431 | 1,233,926 |
| Army | W911NF-11-2-0054 | Multi-input, multimodal, mammalian information processing circuits | 12.431 | 954,121 |
| Army | W911NF-12-1-0210 | Silicon Photonic 3D- Integrated Reduced Energy Transmission (SPIRET) | 12.910 | -29,295 |
| Army | W911NF-12-1-0290 | Developing Novel Frameworks for Many-Body Ensembles | 12.431 | 146,508 |
| Army | W911NF-12-1-0306 | China's Emerging Capabilities in Energy Technology Innovation and Development | 12.431 | 77,814 |
| Army | W911NF-12-1-0486 | Quantum Algorithms where Physics and Math Meet | 12.431 | 663,574 |
| Army | W911NF-12-2-0039 | Barrier-Immune-Organ: Microphysiology, Microenvironment Engineered Tissue Construct Systems (BIO-MIMETICS) | 12.431 | 4,692,754 |
| Army | W911NF-13-1-0031 | New Forms of Matter in Optical Lattices | 12.431 | 257,898 |
| Army | W911NF-13-1-0063 | Measurement and Analysis of Granular Soil Beneath Lightweight Robotic Running Gear | 12.431 | 254,331 |
| Army | W911NF-13-1-0189 | Strongly Correlated Quantum Gases of Atoms and Dipolar Molecules | 12.431 | 291,053 |
| Army | W911NF-13-1-0212 | Fundamental Theory and Parallel Inference for Probabilistic Programming (10.3.1 Integrated Intelligence) | 12.431 | 109,356 |
| Army | W911NF-13-1-0411 | DURIP: A laser system for spin-dependent optical lattices and polar molecules | 12.431 | 89,253 |
| Army | W911NF-13-1-0422 | How does unit size affect collective intelligence in online groups? | 12.431 | 171,989 |
| Army | W911NF-13-2-0047 | Hybrid Graphene - MoS2 Structures for Advanced Electronics | 12.431 | 18,143 |

Appendix A1
Massachusetts Institute of Technology
Federal Research Support - On Campus
FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| Army | W911NF-13-D-0001, T.O. 1 | ISN 3 FY'13 funding | 12.431 | 667,740 |
| Army | W911NF-13-D-0001, T.O. 2 | ISN 3 FY'13 funding | 12.431 | 1,223,111 |
| Army | W911NF-13-D-0001, T.O. 3 | ISN 3 FY'13 funding | 12.431 | 1,009,918 |
| Army | W911NF-13-D-0001, T.O. 4 | ISN 3 FY'13 funding | 12.431 | 993,466 |
| Army | W911NF-13-D-0001, T.O. 5 | ISN 3 FY'13 funding | 12.431 | 2,007,941 |
| Army | W911NF-13-D-0001, T.O. 6 | ISN 3 FY'13 funding | 12.431 | 848,790 |
| Army | W911NF-13-D-0001, T.O. 7 | ISN 3 FY'13 funding | 12.431 | 1,249,147 |
| Army | W911NF-13-D-0001, T.O. 8 | ISN 3 FY'13 funding | 12.431 | 1,721,473 |
| Army | W911NF-13-D-0001, T.O. 9 | ISN 3 FY'13 funding | 12.431 | 806,176 |
| Army | W911NF-14-1-0004 | Personnel Fabrication | 12.431 | 39,650 |
| Army | W911NF-14-1-0014 | Portable Retinal Imaging Device (Core Competency 1.3.4. - Infrared Detectors & Power Sources) | 12.431 | 345,239 |
| Army | W911NF-14-1-0037 | Probing the Effects of Topography on Bedrock Fracture in the Shallow Subsurface | 12.431 | 134,567 |
| Army | W911NF-14-1-0087 | PRECISION ASSEMBLY OF SYSTEMS ON SURFACES (PASS) | 12.431 | 161,951 |
| Army | W911NF-14-1-0205 | Toward Theoretical Foundations of Resistive Force Theory of Granular-Structural Interaction, with Expansions to Flexible Locomotors: Research Area 11.1 | 12.431 | 44,196 |
| Army | W911NF-14-1-0344 | Novel states of light and matter mediated by collective Rydberg excitations | 12.431 | 142,307 |
| Army | W911NF-14-1-0433 | A Belief-Space Approach to Integrated Intelligence- Research Area 10.3: Intelligent Networks | 12.431 | 116,811 |
| Army | W911NF-14-1-0539 | Design of Stable Nanocrystalline Alloys in Compound-Forming Systems | 12.431 | 39,453 |
| Army | W911NF-14-1-0594 | DURIP: Laser System for Inducing Strong Photon-Photon Interactions through Atomic Interactions | 12.431 | 249,992 |
| Army | W911NF-14-2-0071 | Terahertz Nitride Sources (TNS) | 12.431 | 91,777 |
| Army | W911NF-14-2-0102 | Hybrid Graphene - MoS2 Structures for Advanced Electronics | 12.431 | 104,770 |
| Army | W911NF-15-1-0128 | Realizing Novel Phases of Materials with Light-Matter Interaction | 12.431 | 3,846 |
| Army | W911NF-15-1-0164 | 11.2/1.3.2 A variational method for the extraction of intermittently unstable time-dependent modes directly from system observables | 12.431 | 4,097 |
| Army | W911NF-15-1-0166 | Managing Uncertainty: Principles For Robust And Dexterous Continuum Mechanics | 12.431 | 7,371 |
| Army | W911NF-15-1-0183 | MoD Molecules on Demand | 12.431 | 6,482 |
| Army | W911NF-15-1-0196 | Explaining and Exploiting the Resistive Force Theory - Toward optimal, flexible, locomotor designs: Research Area 1.3.1 | 12.431 | 40,793 |

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Massachusetts Institute of Technology
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FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------------|
| Army | W911QY-12-1-0005 | Functional Micro-Dispensers for Controlled Release of Low Toxicity Pesticides. | 12.360 | 156,391 |
| Army | W912HQ-09-C-0008 | Passive PE Sampling of In Situ Remediation of Contaminated Sediments | 12.431 | 4,180 |
| Army | W912HQ-10-C-0005 | Robust Means for Estimating Black Carbon-Water Sorption Coefficients of Organic Contaminants in Sediments | 12.431 | 54,836 |
| Army | W912HQ-14-C-0028 | Integrated Passive Sampler-Food Web Modeling Framework for Monitoring Remedy Effectiveness | 12.CCC | 101,180 |
| Army | W912HQ-14-C-0034 | Combining Mass Balance Modeling with Passive Sampling at Contaminated Sediment Sites to Evaluate Continuing Inputs and Food Web Responses to Remedial Actions | 12.CCC | 243,259 |
| DARPA | | Total for Army | | 33,729,714 |
| DARPA | FA8650-11-C-7192 | Cloud Intrusion Detection and Repair | 12.CCC | 1,531,643 |
| DARPA | HR0011-11-C-0100 | Memory System with Monolithic CMOS Photonic Networks for High-Performance, Energy-efficient Embedded Manycore Machines | 12.CCC | 2,354,848 |
| DARPA | HR0011-12-2-0007 | Erbium Silicon Photonic Integrated Oscillator and RADAR (ESPIOR) | 12.910 | 2,804,709 |
| DARPA | HR0011-12-C-0067 | Establishment of an MIT Foundry for Massively Multi-Part System Engineering | 12.910 | 449,167 |
| DARPA | HR0011-13-2-0005 | Carbon: Embedded Organic Computing | 12.910 | 300,312 |
| DARPA | HR0011-13-2-0009 | Membrane-Enhanced Evaporative Cooling for High Flux Thermal Management | 12.910 | 230,125 |
| DARPA | HR0011-14-2-0004 | Multimodal Imaging and Multiscale Computational Modeling for the Functional Architecture of the Human Brain | 12.91 | 154,749 |
| DARPA | HR0011-14-C-0067 | The MIT-Broad Foundry: TA1 | 12.CCC | 100,185 |
| DARPA | HR0011-15-2-0033 | Technology to Genetically Engineer Otherwise Intractable Bacteria to Manipulate Microbiomes | 12.CCC | 1,130 |
| DARPA | HR0011-15-C-0056 | Chip-Scale Electronic - Photonic Synthesizer (CS-EPS) | 12.CCC | 43,806 |
| Navy | | Total for DARPA | | 7,970,676 |
| Navy | MURI N00014-07-1-0749 | MURI: Cognitively Compatible and Collaboratively Balanced Human-Robot Teaming in Urban Military Domains (Topic #8) | 12.300 | 53,873 |
| Navy | N00014-08-1-1247 | Information Theory for Bosonic Channels | 12.300 | -881 |
| Navy | N00014-09-1-0458 | Collaborative Proposal: Studies of Stirring and Mixing at the Submesoscale in the Ocean | 12.300 | 11,636 |
| Navy | N00014-09-1-0597 | ECIR - Explorations in Cyber International Relations | 12.300 | 49,764 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| Navy | N00014-09-1-0625 | Integrating Global and Local Situational Awareness in Distributed Unmanned and Manned Ground Operations | 12.300 | 289,375 |
| Navy | N00014-09-1-0641 | Autonomy for Micro Air Vehicles to Support Dismounted Marines | 12.300 | 21,621 |
| Navy | N00014-09-1-0952 | Nonlinear Response Modeling of Vessels in Steep Random Waves | 12.300 | 73,634 |
| Navy | N00014-09-1-1051 | Smart Adaptive Reliable Teams for Persistent Surveillance (SMARTS) | 12.300 | 942,756 |
| Navy | N00014-09-1-1063 | Graphene Approaches to Terahertz Electronics (GATE) | 12.300 | 272,022 |
| Navy | N00014-10-1-0562 | PECASE: Merger of Structure and Material: Comparative Bottom-Up Analysis of Hierarchical Protein Materials | 12.300 | 263,423 |
| Navy | N00014-10-1-0758 | Recruiting the Next Generation of Naval Architects | 12.300 | 10,380 |
| Navy | N00014-10-1-0759 | Rex III/IV Unmanned Underwater Vehicle | 12.300 | 3,168 |
| Navy | N00014-10-1-0843 | Strongly Interacting Fermi Gases in Two Dimensions | 12.300 | 35,415 |
| Navy | N00014-10-1-0951 | Provably-Stable Vision-Based Control of High-Speed Flight through Forest and Urban Environments | 12.300 | 1,759,438 |
| Navy | N00014-10-1-0957 | TAWG participation and electron beam diagnostic design | 12.300 | 8,513 |
| Navy | N00014-11-1-0064 | A Unified Approach to Passive and Active Ocean Acoustic Waveguide Remote Sensing | 12.300 | 62,029 |
| Navy | N00014-11-1-0212 | New Technologies through Computational Materials Design | 12.300 | -5,403 |
| Navy | N00014-11-1-0337 | Active Transfer Learning For Ocean Modeling | 12.300 | 77,798 |
| Navy | N00014-11-1-0397 | Network Localization and Navigation in GPS-Challenged Environments | 12.300 | 165,148 |
| Navy | N00014-11-1-0486 | MOOS-IVP Autonomous Decision Making Using Multi-Objective Optimization | 12.300 | -103 |
| Navy | N00014-11-1-0598 | CFD Methods for seakeeping and propeller analysis of swath hull forms | 12.300 | 6,005 |
| Navy | N00014-11-1-0657 | A New Environmentally Sound Technology for Metals Extraction: a Technical Feasibility Study of Rare-Earth Metal Production by Molten Oxide Electrolysis | 12.300 | 76,184 |
| Navy | N00014-11-1-0687 | Engineering Multifunctional and Multiscale Nanomaterials with Synthetic Biology | 12.300 | 1,770 |
| Navy | N00014-11-1-0688 | Nonparametric Bayesian Models to Represent Knowledge and Uncertainty for Decentralized Planning | 12.300 | 1,500,189 |
| Navy | N00014-11-1-0713 | A Certified Reduced Basis Element Method for Interactive and Reliable Design and Parameter Estimation | 12.300 | 305,825 |
| Navy | N00014-12-1-0033 | Online and Dynamic Optimization Under Uncertainty | 12.300 | 71,734 |
| Navy | N00014-12-1-0050 | Vector Sensor Array Signal Processing | 12.300 | 79,699 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| Navy | N00014-12-1-0064 | Control of Heterogeneous Wireless Networks: From Theory to Practice | 12.300 | 112,374 |
| Navy | N00014-12-1-0071 | Prospective Human-Guided Teleautonomy for Agile Mobility and Dexterous Manipulation | 12.300 | 432,616 |
| Navy | N00014-12-1-0093 | Extended Capabilities for the HAUV Ship-Inspection Vehicle | 12.300 | 276,764 |
| Navy | N00014-12-1-0128 | Joint US-Norway Ocean Acoustic Experiments in the Nordic Seas Waters of the Arctic Circle | 12.300 | 28,319 |
| Navy | N00014-12-1-0458 | Programmable Synthetic Combinatorial Sensors in Bacteria | 12.300 | 182,855 |
| Navy | N00014-12-1-0521 | A New Technology for Metals Extraction: High-temperature electrolysis of Molten Sulfide/Oxide Electrolysis for Molybdenum and Rhenium Extraction | 12.300 | 258,101 |
| Navy | N00014-12-1-0530 | Direct real-time measurement of energetic materials under dynamic shock loading | 12.300 | 135,533 |
| Navy | N00014-12-1-0624 | Advanced Nanoengineered Thermal Management Devices | 12.300 | 138,715 |
| Navy | N00014-12-1-0665 | Characterizing Surface Transport Barriers in the East Sea of Vietnam | 12.300 | 122,642 |
| Navy | N00014-12-1-0784 | Proposal for MIT Reef Explorer III Unmanned Underwater Vehicle and Unmanned Surface Vehicle to DoD DURIP FY2012 | 12.300 | 40,767 |
| Navy | N00014-12-1-0915 | Ultra-High Performance ADCs in GaN | 12.300 | 247,884 |
| Navy | N00014-12-1-0944 | Stochastic Forcing for Ocean Uncertainty Predictions | 12.300 | -8 |
| Navy | N00014-12-1-0959 | Low Dimensionality Transistors for High Performance Electronics | 12.300 | 194,180 |
| Navy | N00014-12-1-0999 | Decentralized online optimization in multi-agent systems in dynamic and uncertain environments | 12.300 | 321,170 |
| Navy | N00014-12-1-1000 | persistent Decentralized Online Tasks (pDOT): An Online Optimization Approach to Multi-Agent Persistent Monitoring in Uncertain Environments | 12.300 | 298,095 |
| Navy | N00014-13-1-0059 | PhD Student Support on Prediction and Cancellation of Vortex Induced Vibrations of Towed Cables | 12.300 | 2,120 |
| Navy | N00014-13-1-0074 | Next-generation Genetic Devices: Model-guided Discovery and Optimization of Navy-relevant Cell-based Sensors | 12.300 | 1,955,041 |
| Navy | N00014-13-1-0213 | Nanositched Composites with Improved Interlaminar and Intralaminar Strengths for Advanced Airframes in Sea-based Aviation | 12.300 | 109,158 |
| Navy | N00014-13-1-0260 | Categorical Informatics | 12.300 | 194,887 |
| Navy | N00014-13-1-0301 | Exchange interaction at the interface in Dirac systems and organic radicals Understanding the phenomenon towards its utilization | 12.300 | 61,412 |
| Navy | N00014-13-1-0332 | Hybrid Planing Hulls for Reduced Powering Demand and Increased Seakeeping Performance | 12.300 | 147,225 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| Navy | N00014-13-1-0333 | Probabilistic Programming and Computational Cognitive Science | 12.300 | 23,886 |
| Navy | N00014-13-1-0352 | Quantifying the Dynamic Ocean Surface Using Underwater Radiometric Measurements | 12.300 | 91,694 |
| Navy | N00014-13-1-0398 | Underway Wireless Recharging of AUVs | 12.300 | 12,149 |
| Navy | N00014-13-1-0403 | Inversion, uncertainties, and multiple scattering in synthetic aperture radar/sonar | 12.300 | 105,745 |
| Navy | N00014-13-1-0424 | Ultra-High-Throughput Design and Optimization of Sense-and-Actuate Circuits in Marine and Soil Bacteria | 12.300 | 384,237 |
| Navy | N00014-13-1-0447 | Quantifying Breaking-Wave Dissipation Using Nonlinear Phase-Resolved Wavefield Simulations | 12.300 | 135,242 |
| Navy | N00014-13-1-0487 | Continuation of Oceanographic Variability and the Performance of Passive and Active Sonars in the Philippine Sea Signatures | 12.300 | 197,004 |
| Navy | N00014-13-1-0509 | Terahertz-Driven Energetic Material Decomposition | 12.300 | 319,829 |
| Navy | N00014-13-1-0518 | Multiscale Data Assimilation | 12.300 | 4,454 |
| Navy | N00014-13-1-0588 | Performance Analysis of Feature-Based Navigation in Dynamic Environments | 12.300 | 79,317 |
| Navy | N00014-13-1-0610 | Quantum Transport and Optoelectronics in Atomically Layered Materials | 12.300 | 267,897 |
| Navy | N00014-13-1-0623 | VAMPIRE II: Accessing a life-blood of information for acoustic signature assessment and condition-based maintenance | 12.300 | 162,330 |
| Navy | N00014-13-1-0647 | Biologically Inspired Engineering of Underwater Adhesives with Synthetic Biology | 12.300 | 109,611 |
| Navy | N00014-13-1-0664 | High Performance Computing for Nucleic Acid Nanotechnology | 12.300 | 0 |
| Navy | N00014-13-1-0676 | Direct Real-time Measurement of Energetic Materials Under Dynamic Shock Loading | 12.300 | 5,500 |
| Navy | N00014-13-1-0710 | Human-Guided Teleautonomy for Remote Mobility and Dexterous Manipulation | 12.300 | 159,515 |
| Navy | N00014-13-1-0774 | Quantum-Secured Communication for the Maritime Environment | 12.300 | 635,220 |
| Navy | N00014-13-1-0820 | Versatile Sputtering System Enabling Discovery and Scalable Manufacturing of 3D Nanostructured Materials | 12.300 | 174,075 |
| Navy | N00014-13-1-0834 | Adjoint Equations Methods for Full Parametric Optimization of Ship Hull Forms with Free Surface BEMs and Gradient-Accelerated Optimization Algorithms | 12.300 | 186,995 |
| Navy | N00014-13-1-0878 | METANORM- A Multidisciplinary Approach to the Analysis and Evaluation of Norms and Models of Governance for Cyberspace | 12.300 | 566,339 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| Navy | N00014-14-1-0006 | Defeating Code Resue Attacks Using Minimal Hardware Modifications | 12.300 | 342,475 |
| Navy | N00014-14-1-0062 | Hurricane Outflow Criticality: Observational Tests and Effect on Hurricane Structure and Intensity | 12.300 | 111,678 |
| Navy | N00014-14-1-0072 | Optimization over combinatorial optimization polytopes | 12.300 | 135,017 |
| Navy | N00014-14-1-0073 | Practical, Fast, and Approximate Algorithms for Discrete Optimization Problems | 12.300 | 104,464 |
| Navy | N00014-14-1-0135 | Mechanistic Study and Modeling of Air Entrainment and Bubbly Flow in Ship Wakes | 12.300 | 217,781 |
| Navy | N00014-14-1-0138 | Fundamental Mechanics of Joints and Assemblies of Long Aligned Carbon Nanotubes | 12.300 | 152,440 |
| Navy | N00014-14-1-0166 | ESRDC - DESIGNING AND POWERING THE FUTURE FLEET | 12.300 | 408,591 |
| Navy | N00014-14-1-0191 | A Unified Approach to Passive and Active Ocean Acoustic Waveguide Remote Sensing | 12.300 | 409,404 |
| Navy | N00014-14-1-0214 | GOATS '14: Adaptive and Collaborative Exploitation of 3-Dimensional Environmental Acoustics in Distributed Undersea Networks | 12.300 | 161,262 |
| Navy | N00014-14-1-0272 | Superconductor armature winding for high performance electrical machines | 12.300 | 312,050 |
| Navy | N00014-14-1-0282 | Design and Metrology Support for High Power Fault Testing Systems | 12.300 | 25,992 |
| Navy | N00014-14-1-0349 | Hybrid Graphene-Silicon Photonic Devices for Signal Processing and Imaging | 12.300 | 152,702 |
| Navy | N00014-14-1-0476 | Long-duration Environmentally-adaptive Autonomous Rigorous Naval Systems (LEARNS) | 12.300 | 183,461 |
| Navy | N00014-14-1-0486 | Active Perception, Representation and Estimation for Large-Scale Long-Horizon Domains | 12.300 | 226,356 |
| Navy | N00014-14-1-0520 | A Physics-Constrained Order-Reduction Framework for the Dynamical Description of Subspaces-of-Interest in Turbulent Dynamical Systems | 12.300 | 61,596 |
| Navy | N00014-14-1-0524 | Flow Structure Interaction of a Dam-Break Wave Impinging on Flexible Plate | 12.300 | 99,687 |
| Navy | N00014-14-1-0609 | Computer-Aided Engineering for Nucleic Acid-Based Nanotechnology | 12.300 | 348,498 |
| Navy | N00014-14-1-0619 | Harassing Extraordinary Surface and Bulk Properties of Graphene-Polymer Nanocomposite for Advanced Naval Coating | 12.300 | 128,260 |
| Navy | N00014-14-1-0696 | ESRDC - DESIGNING AND POWERING THE FUTURE FLEET | 12.300 | 180,049 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| Navy | N00014-14-1-0725 | Bayesian Nonlinear Assimilation of Eulerian and Lagrangian Coastal Flow Data | 12.300 | 158,057 |
| Navy | N00014-14-1-0767 | Merger of Computational Optimization and Additive Manufacturing for Functional Material Design | 12.300 | 354,494 |
| Navy | N00014-14-1-0804 | Quantum Spin Gyroscope | 12.300 | 60,995 |
| Navy | N00014-14-1-0808 | DURIP: Cryogenic Apparatus for Maritime Communication Device and System Development | 12.300 | 113,183 |
| Navy | N00014-15-1-0034 | Synthetic Biology for Advanced Functional Materials | 12.300 | 417,543 |
| Navy | N00014-15-1-2083 | Online Optimization and Learning under Uncertainty | 12.300 | 30,943 |
| Navy | N00014-15-1-2213 | Multi-Objective COLREGS-Based Collision Avoidance for Unmanned Marine Vehicles | 12.300 | 29,813 |
| Navy | N00014-15-1-2227 | Multi-objective Optimization and Mixed-Horizon Decision-Making for Autonomous Vehicles | 12.300 | 33,019 |
| Navy | N00173-13-2-C009 | Stochastic Forcing for Environmental Error and Probabilistic Estimation | 12.300 | 34,699 |
| Navy | N00189-14-C-Z082 | Engineering Support for the Interagency Correlator | 12.CCC | 47,727 |
| Navy | N00244-09-1-0064 | Natural Armor: An Untapped Encyclopedia of Engineering Designs for Protective Defense Applications | 12.300 | 354,059 |
| Navy | N00244-14-1-0018 | Program and Portfolio Affordability Tradeoffs Under Uncertainty Using Epoch-Era Analysis | 12.300 | 68,063 |
| Navy | N66001-10-2-4089 | CANDOR: Clean-Slate System Integrity using Selective Redot | 12.910 | 545,511 |
| Navy | N66001-11-1-4182 | Continuous Monitoring and Separation of Blood for Mitigation of Sepsis | 12.910 | 440,576 |
| Navy | N66001-11-1-4192 | CUBIX - Coherent Ultrabright Inverse Compton Scattering X-Ray Sources | 12.910 | 95,925 |
| Navy | N66001-11-C-4147 | Compact, On-Demand Continuous Flow Manufacturing of Pharmaceuticals | 12.910 | 1,085,977 |
| Navy | N66001-12-1-4212 | Field Emission Arrays for Dynamic Pattern Generation | 12.910 | 160,218 |
| Navy | N66001-12-1-4242 | High-fidelity Mapping from Specification to Fabrication | 12.910 | 6,411 |
| Navy | N66001-12-C-0082 | Accountable Information Usage in Distributed Information Sharing Environments | 12.CCC | 439,324 |
| Navy | N66001-12-C-4016 | Synthetic Single-Invertase Memory Modules for Persistent Biological Encoding | 12.CCC | 200,247 |
| Navy | N66001-13-1-4022 | Complete Si-GaN Circuits+MEMS Integration | 12.91 | 520,774 |
| Navy | N66001-13-1-4027 | Chip Intergrated Timing and Inertial Measurement | 12.910 | 129,217 |
| Navy | N66001-13-C-4025 | INSCyT 2: Phase II Patent | 12.CCC | 7,310 |
| Navy | N66001-13-C-4025 | Integrated and Scalable Cyto-Technologies (INSCyT) for Flexible Microbial Manufacturing | 12.CCC | 5,774,220 |
| Navy | N66001-14-1-4039 | Energy-Efficient Embedded Vision Systems | 12.910 | 202,116 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|--|----------------------------|--|--------|-------------------|
| Navy | N66001-14-2-4058 | Synthetic polymer xenoproteins | 12.910 | 2,607,898 |
| Navy | N66001-15-1-4022 | Field Emission Arrays for Dynamic Pattern Generation | 12.910 | 189,606 |
| Navy | N66001-15-C-4030 | Multi-Scale Representation and Translation for Complex, Heterogeneous Materials | 12.CCC | 54,135 |
| Navy | N66604-14-P-0495 | Basic Research into Development of a Measurement Method for Sensing Details of a Body-Enclosing Cavity | 12.CCC | 1,677 |
| Total for Navy | | | | 32,941,404 |
| Other DOD | | | | |
| Other DOD | H98230-14-1-0109 | Non-local Lie conformal algebras and integrable systems | 12.901 | 27,607 |
| Other DOD | H98230-14-C-1424 | Supercloud: a Unified Approach to Compute, Big Data, Database and Enterprise Clouds | 12.CCC | 724,002 |
| Other DOD | HDTRA1-11-1-0062 | Powder Processing of Amorphous Tungsten-Bearing Alloys Composites | 12.351 | 85,151 |
| Other DOD | HDTRA1-12-1-0008 | Blast Wave Manipulation Using Hierarchical Metamaterial Structures | 12.351 | 407,381 |
| Other DOD | HDTRA1-12-1-0044 | Intense Terahertz Fields for Fast Energy Release | 12.351 | 96,582 |
| Other DOD | HDTRA1-13-1-0001 | Evaluation of Radiation-Induced Photonic Defects in Si, Ge, Chalcogenides and Polymers | 12.351 | 241,878 |
| Other DOD | HDTRA1-13-1-0038 | Nucleopore Membrane Mimics As Selective Filters for Biological Agents | 12.351 | 445,751 |
| Other DOD | HDTRA1-14-1-0007 | Engineered Autonomous Distributed Circuits for Adaptive Threat Elimination | 12.351 | 438,204 |
| Other DOD | HDTRA1-14-1-0057 | Radiation Effects in III-V MOSFETs for sub-10 nm CMOS | 12.351 | 335,983 |
| Other DOD | HDTRA1-15-1-0040 | Development of Synthetic Probiotics to Detect and Eliminate Biothreat Agents | 12.351 | 11,214 |
| Total for Other DOD | | | | 2,813,753 |
| TOTAL for Department of Defense | | | | 96,932,793 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|-----------------------------|----------------------------|---|--------|-------------|
| DEPARTMENT OF ENERGY | | | | |
| DOE | 4F-30121 | Technologies and Concepts to Reduce the US Dependence on Imported Petroleum and Emission of Greenhouse Warming Pollutants | 81.CCC | 84,571 |
| DOE | B600100 | High Density Implosions on the National Ignition Facility | 81.CCC | 660,165 |
| DOE | B601821 | Structurally Robust Materials with Ultra-Low Thermal Expansion via Designed Microscale Architectures (Phase II) | 81.CCC | 141,873 |
| DOE | B602126 | Chemical Threat Responsive Carbon Nanotube Membranes | 81.CCC | 455,526 |
| DOE | B608180 | Study of Point Defects in TlBr and Their Impact on Device Lifetime | 81.CCC | 67,156 |
| DOE | B609612 | LDRD: Scalable Holographic and Hierarchical Micromanufacturing Techniques | 81.CCC | 179,845 |
| DOE | DE-AR0000180 | Hybrid nanostructures for high-energy-density solar thermal fuels | 81.135 | 352,095 |
| DOE | DE-AR0000181 | Metallic Composites Phase-Change Materials for High-Temperature Thermal Energy Storage | 81.135 | 133,052 |
| DOE | DE-AR0000185 | Advanced Thermo-Adsorptive Battery Climate Control System (ATB) | 81.135 | 579,063 |
| DOE | DE-AR0000294 | Scalable, self-powered purification technology for brackish and heavy metal-contaminated water | 81.135 | 150,921 |
| DOE | DE-AR0000321 | Compact, inexpensive Micro-Reformers for Distributed GTL Systems | 81.135 | 6,323 |
| DOE | DE-AR0000433 | Engineering high yield pathways for methane activation and conversion to liquid fuels | 81.135 | 982,240 |
| DOE | DE-AR0000471 | Full Spectrum Stacked Solar-Thermal and PV Receiver | 81.135 | 1,063,554 |
| DOE | DE-AR0000472 | Spectrum Splitting for High-Efficiency Photovoltaic and Solar Thermal Energy Generation | 81.135 | 553,256 |
| DOE | DE-EE0005320 | Scalable High-Efficiency Thin-Crystalline Si Cells Enabled by Light Trapping Nanostructures | 81.087 | -924 |
| DOE | DE-EE0005329 | Next-Generation Sulfide Materials: Optimizing CZTS and Developing SNS by Systematic Defect Engineering | 81.087 | 171,806 |
| DOE | DE-EE0005444 | High Compression Ratio Turbo Gasoline Engine Operation Using Alcohol Enhancement | 81.086 | 213,016 |
| DOE | DE-EE0005445 | Lubricant Formulations to Enhance Engine Efficiency in Modern Internal Combustion Engines | 81.086 | 227,311 |
| DOE | DE-EE0005756 | Continuous Processing of High Thermal Conductivity Polyethylene Sheets | 81.086 | 248,150 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| DOE | DE-EE0005806 | Concentrated Solar Thermoelectric Power | 81.087 | 317,976 |
| DOE | DE-EE0006131 | Evaluating the causes of photovoltaics cost reduction: Why is PV different? | 81.087 | 180,346 |
| DOE | DE-EI0001908 | Understanding Energy Demand in China's Future Transportation System | 81.089 | 144,640 |
| DOE | DE-FC02-01ER54648 | Center for Simulation of Wave Plasma Interactions | 81.049 | 293,419 |
| DOE | DE-FC02-04ER54802 | Center for Extended Magnetohydrodynamic Modeling | 81.049 | 19,470 |
| DOE | DE-FC02-08ER54966 | Center for the Study of Microturbulence | 81.049 | 49,417 |
| DOE | DE-FC02-08ER54969 | Center for Extended Magnetohydrodynamics Modeling | 81.049 | 71,681 |
| DOE | DE-FC02-93ER54186 | D&T Parent | 81.049 | 694,817 |
| DOE | DE-FC02-94ER40818 | Laboratory for Nuclear Science (Nuclear Physics) | 81.049 | 2,693,037 |
| DOE | DE-FC02-99ER54512 | Alcator C-Mod | 81.049 | 15,754,348 |
| DOE | DE-FE0009738 | Enhanced Simulation Tools to Improve Predictions and Performance of Geologic Storage: Coupled Modeling of Fault Poromechanics, and High-Resolution Simulation of CO2 Migration and Trapping | 81.089 | 226,507 |
| DOE | DE-FE0013999 | Fate of Methane emitted from dissociating marine hydrates: Modeling, Laboratory and Field constraints | 81.089 | 306,845 |
| DOE | DE-FG02-00ER15087 | Revealing Nanoscale Energy Flow Using Ultrafast Terahertz to X-Ray Beams | 81.049 | 95,868 |
| DOE | DE-FG02-00ER15087 | Ultrafast Coherent Soft X-Rays: A Novel Tool for Spectroscopy of Collective Behavior in Complex Materials | 81.049 | 155,991 |
| DOE | DE-FG02-02ER45977 | Heat Conduction in Nanowire Structures | 81.049 | -11,877 |
| DOE | DE-FG02-02ER45977 | Spectrally-tunable far-field thermal radiation extraction | 81.049 | 157,656 |
| DOE | DE-FG02-03ER46076 | Strongly Correlated Electronic Systems: Local Moments and Conduction Electrons | 81.049 | 181,661 |
| DOE | DE-FG02-03-ER54700 | Physics of High Energy Plasmas | 81.049 | 349,515 |
| DOE | DE-FG02-04ER46149 | Self-Assembling Biological Springs Force Transducers on the Micron Nanoscale | 81.049 | 19,309 |
| DOE | DE-FG02-05ER41360 | Laboratory for Nuclear Science - High Energy Physics Program | 81.049 | -13,755 |
| DOE | DE-FG02-07ER15839 | Experimental investigation of flow-induced fabrics in rocks at upper-mantle pressures: Application to understanding mantle dynamics and seismic anisotropy | 81.049 | 40,504 |
| DOE | DE-FG02-07ER46454 | Probing nanocrystal electronic structure and dynamics in the limit of single nanocrystals | 81.049 | 328,469 |
| DOE | DE-FG02-07ER46474 | High Efficiency Biomimetic Organic Solar Cells | 81.049 | 393,433 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| DOE | DE-FG02-08ER46488 | Self-Assembly & Self-Repair of Novel Photosynthetic Reaction Center/Single Walled Carbon Nanotube Complexes for Solar Energy Conversion | 81.049 | -1,586 |
| DOE | DE-FG02-08ER46488 MOD 0008 | Self-Assembly and Self-Repair of Novel Photovoltaic Complexes: Synthetic Analogs of Natural Processes | 81.049 | 26,802 |
| DOE | DE-FG02-08ER46514 | Novel Temperature Limited Tunneling Spectroscopy of Quantum Hall Systems | 81.049 | 183,543 |
| DOE | DE-FG02-08ER46515 | Measurement of Single Electronic Charging of Semiconductor Nano-Crystal | 81.049 | -34,032 |
| DOE | DE-FG02-08ER46521 | Ultrafast Electronic and Structural Dynamics in Complex Materials | 81.049 | 223,271 |
| DOE | DE-FG02-09ER46556 | Optics for Advanced Neutron Imaging | 81.049 | 106,584 |
| DOE | DE-FG02-86ER13564 | Catalysts for the Living Polymerizations of Olefins | 81.049 | 193,089 |
| DOE | DE-FG02-87ER13671 | Spectroscopic and Dynamical Studies of Highly Energized Small Polyatomic Molecules | 81.049 | 154,165 |
| DOE | DE-FG02-90ER45429 | Neutron and X-Ray Scattering Studies of Kinetic Glass Transition in Colloidal Systems | 81.049 | 289,306 |
| DOE | DE-FG02-91ER54109 | APTT Parent | 81.049 | 389,942 |
| DOE | DE-FG02-91ER54109 | THEORETICAL RESEARCH IN ADVANCED PHYSICS AND TECHNOLOGY | 81.049 | 639,316 |
| DOE | DE-FG02-94ER40818 | Laboratory for Nuclear Science (Nuclear Physics) | 81.049 | -82 |
| DOE | DE-FG02-94ER54235 | APTE Parent | 81.049 | 321,321 |
| DOE | DE-FG02-94ER61937 | An Integrated Framework for Climate Change Assessment | 81.049 | 1,075,783 |
| DOE | DE-FG02-96ER45571 | First Principles Determination of Structure, Thermodynamics, and Transport in Metals and Oxides | 81.049 | 153,621 |
| DOE | DE-FG02-97ER14760 | Evolution of Pore Structure and Permeability of Rocks Under Hydrothermal Conditions | 81.049 | 328,987 |
| DOE | DE-FG02-99ER15004 | Physics of Channelization: Theory, Experiment, and Observation | 81.049 | 153,893 |
| DOE | DE-FG02-99ER54525 | PROPAGATION AND DAMPING OF HIGH HARMONIC FAST WAVES AND ELECTRON CYCLOTRON WAVES IN THE NSTX-U-DEVICE | 81.049 | 152,478 |
| DOE | DE-FG02-99ER54563 | Fast Particle Wave Interaction and Alfvén Eigenmodes in the JET Tokamak Plasma | 81.049 | 17,910 |
| DOE | DE-FG02-99ER54563 | Fast Particle-wave Interaction and Alfvén Eigenmodes in the JET Tokamak Plasma | 81.049 | 220,480 |
| DOE | DE-NA0001523 | 3D Variations in Seismic Wavespeed and Mass Density in the Crust and Upper Mantle of SE Asia from Joint Inversion of Seismic and Gravity Data | 81.CCC | 164,531 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|---------------------------------|--|--------|-------------|
| DOE | DE-NA0001857 | HEDLP Studies of Fields, Matter, Transport, Nuclear Physics, and ICF with New Diagnostics at the NIF and Omega/Omega-EOP | 81.112 | 515,325 |
| DOE | DE-NA0002035 | Studies of high-energy-density plasmas, inertial-confinement-fusion implosions, and nuclear science for astrophysics | 81.112 | 377,140 |
| DOE | DE-NE0000460 | Infrastructure Upgrade (Minor) to the MITR Research Reactor in Support of Operational Safety | 81.121 | -44 |
| DOE | DE-NE0000682 | NEUP Reactor Upgrades: Infrastructure Upgrade (Minor) to MITR Research Reactor | 81.121 | 81,279 |
| DOE | DE-NE0008239 | University Reactor Upgrades Infrastructure Support for the MITR Research Reactor in Support of Operational Safety | 81.121 | 38,900 |
| DOE | DE-NE0008268 | Extraction of Uranium from Seawater: Design and Testing of a Symbiotic System | 81.121 | 4,885 |
| DOE | DE-NE0008270 | Integral Full Core Multi-Physics PWR Benchmark with Measured Data | 81.121 | 22,140 |
| DOE | DE-NE0008285-001 | Integrated FHR Technology Development: Tritium Management, Materials Testing, Salt Chemistry Control, Thermal-Hydraulics and Neutronics with Associated Benchmarking | 81.121 | 441,616 |
| DOE | DE-SC0001088 | ARRA - Recovery Act - Center for Excitonics - EFRC - Parent | 81.049 | 522,183 |
| DOE | DE-SC0001088 | Center for Excitonics - Main Operating Account for Deposits & Distributions | 81.049 | 2,713,917 |
| DOE | DE-SC0001299 | Solid-State Solar-Thermal Energy Conversion Center (S3Tec Center) | 81.049 | 42,791 |
| DOE | DE-SC0001299 | Solid-State Solar-Thermal Energy Conversion Center (S3TEC) | 81.049 | 2,379,169 |
| DOE | DE-SC0001299/ DE-FG02-09ER46577 | Solid-State Solar-Thermal Energy Conversion Center (S3Tec Center) | 81.049 | 511,359 |
| DOE | DE-SC0002060 | ARRA - TAS::89 0227::TAS RECOVERY ACT - PLASMA SCIENCE CENTER BRIDGING THE PSI KNOWLEDGE.GAP | 81.049 | 44,544 |
| DOE | DE-SC0002626 | Electrochemically-Driven Phase Transitions in Battery Storage Compounds | 81.049 | 145,499 |
| DOE | DE-SC0002633 | SISGR: Chemomechanics of Far-From Equilibrium Interfaces | 81.049 | 991,415 |
| DOE | DE-SC0003907 | ARRA - TAS:89 0227::TAS Recovery Act - Nonequilibrium Physics and Phase-Field Modeling of Multiphase Flow in Porous Media | 81.049 | 65,802 |
| DOE | DE-SC0003907 | TAS:89 0227::TAS Recovery Act - Nonequilibrium Physics and Phase-Field Modeling of Multiphase Flow in Porous Media | 81.049 | 129,656 |
| DOE | DE-SC0003908 | ARRA - TAS:89 0227::TAS Recovery Act - Predictive Modeling of Complex Physical Systems: New Tools for Uncertainty Quantification, Statistical Inference | 81.049 | 172,483 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| DOE | DE-SC0003908 | TAS:89.0227.:TAS Recovery Act - Predictive Modeling of Complex Physical Systems: New Tools for Uncertainty Quantification, Statistical Inference | 81.049 | 65,351 |
| DOE | DE-SC0005288 | ZettaBricks: A Language Compiler and Runtime System for Anyscale Computing | 81.049 | 63,153 |
| DOE | DE-SC0005372 | Software Synthesis for High Productivity Exascale Computing | 81.049 | 2,188 |
| DOE | DE-SC0006389 | Interpreting New Data from the High Energy Frontier | 81.049 | 179,926 |
| DOE | DE-SC0006418 | Quantum Transport in Topological Insulator Nanoelectronic Devices | 81.049 | 122,326 |
| DOE | DE-SC0006419 | Electron Temperature Fluctuation Measurements and Transport Model Validation at Alcatraz C-Mod | 81.049 | 130,510 |
| DOE | DE-SC0006423 | Optical Manipulation and Detection of Emergent Phenomena in Topological Insulators | 81.049 | 100,435 |
| DOE | DE-SC0006544 | The Electron Diffusion Region in 3D Spontaneous Magnetic Reconnection | 81.049 | -238 |
| DOE | DE-SC0006937 | Electronic and Ionic Conductors from Ordered Microporous Materials | 81.049 | 111,599 |
| DOE | DE-SC0007099 | Quantification of Uncertainty in Extreme Scale Computations (QUEST) | 81.049 | 173,562 |
| DOE | DE-SC0007106 | Thermodynamics of Self-Assembly in Globular Protein-Polymer Conjugates | 81.049 | 332,826 |
| DOE | DE-SC0007114 | Collaborative Research: Quantifying Climate Feedbacks of the Terrestrial Biosphere under Thawing Permafrost Conditions in the Arctic | 81.049 | 16,877 |
| DOE | DE-SC0007883 | Nonlinear and Extended MHD Plasmas | 81.049 | 129,104 |
| DOE | DE-SC0008059 | Graphene Membranes with Tunable Nanometer-Scale Pores | 81.049 | 129,276 |
| DOE | DE-SC0008060 | Predicting Ice Sheet and Climate Evolution at Extreme Scales (PICEES) | 81.049 | 7,969 |
| DOE | DE-SC0008736 | Automated Metadata, Provenance Cataloging and Navigable Interfaces: Ensuring the Usefulness of Extreme-Scale Data | 81.049 | 190,124 |
| DOE | DE-SC0008737 | Partnership for Edge Physics Simulation | 81.049 | 87,275 |
| DOE | DE-SC0008739 | Unconventional Metals in Strongly Correlated Systems | 81.049 | 135,731 |
| DOE | DE-SC0008740 | Development of a Polarized 3He Ion Source for RHIC | 81.049 | 142,745 |
| DOE | DE-SC0008741 | High Intensity Polarized Electron Gun | 81.049 | 147,096 |
| DOE | DE-SC0008742 | Lewis Acid Pairs for the Activation of Biomass-derived Oxygenates in Aqueous Media | 81.049 | 148,079 |
| DOE | DE-SC0008743 | Assembling Resuable Genetic Modules for Efficient Biofuel Production from Marine Macroalgae | 81.049 | 1,328,880 |
| DOE | DE-SC0008744 | Optimizing oil production in oleaginous yeast by cell-wide measurements and genome-based models. | 81.049 | 1,216,205 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| DOE | DE-SC0008766 | Computing Properties of Hadrons, Nuclei and Nuclear Matter from Quantum Chromodynamics | 81.049 | 268,201 |
| DOE | DE-SC0008923 | CAP3: A Computer Aided Performance Programming Platform | 81.049 | 1,761,424 |
| DOE | DE-SC0008926 | Inferring grain boundary properties from measurements on grain boundary networks | 81.049 | 342,925 |
| DOE | DE-SC0009297 | DiaMonD: An Integrated Multifaceted Approach to Mathematics at the Interfaces of Data, Models, and Decisions | 81.049 | 324,088 |
| DOE | DE-SC0009833 | Development of an accelerator-based diagnostic for plasma-facing surfaces in magnetic confinement devices | 81.049 | 205,871 |
| DOE | DE-SC0010075 | High Gradient Accelerator Research | 81.049 | 444,352 |
| DOE | DE-SC0010428 | Biomimetic Templated Self-Assembly of Light Harvesting Nanostructures | 81.049 | 196,271 |
| DOE | DE-SC0010491 | Interaction of Flowing Plasma with Collecting Objects | 81.049 | 130,338 |
| DOE | DE-SC0010492 | Control and Extension of ITER and Advanced Scenarios to Long Pulse in EAST and KSTAR | 81.049 | 537,693 |
| DOE | DE-SC0010495 | From Quarks to the Cosmos: Ab initio studies in nuclear physics | 81.049 | 100,663 |
| DOE | DE-SC0010497 | Gluonic Excitations in Mesons | 81.049 | 183,061 |
| DOE | DE-SC0010526 | Predictive Theory of Topological States of Matter | 81.049 | 182,265 |
| DOE | DE-SC0010538 | Imaging Interfacial Electric Fields on Ultrafast Timescales | 81.049 | 421,594 |
| DOE | DE-SC0010720 | Development of long-pulse heating and current drive actuators and operational techniques compatible with a high-Z divertor and first wall | 81.049 | 1,346,615 |
| DOE | DE-SC0010795 | Mesoscale Mechanochemistry of 2D Crystal Growth | 81.049 | 131,650 |
| DOE | DE-SC0011088 | MIT Relativistic Heavy Ion Group | 81.049 | 1,700,011 |
| DOE | DE-SC0011089 | Active Subspace Methods for Data-Intensive Inverse Problems | 81.049 | 138,603 |
| DOE | DE-SC0011090 | FY2014 - 2016 Task R - Theoretical Nuclear Physics | 81.049 | 1,025,811 |
| DOE | DE-SC0011091 | Neutrino Physics Task W | 81.049 | 272,367 |
| DOE | DE-SC0011755 | AMS Operations | 81.049 | 2,533,200 |
| DOE | DE-SC0011848 | AMS Research | 81.049 | 1,239,025 |
| DOE | DE-SC0011939 | Task A: Particle Physics Collaboration | 81.049 | 1,021,915 |
| DOE | DE-SC0011970 | LEPTON QUARK STUDIES, TASK F SUMMARY, FY 2015-17 | 81.049 | 290,464 |
| DOE | DE-SC0012071 | USBPO Support | 81.049 | 170,220 |
| DOE | DE-SC0012371 | Interface-Driven Chiral Magnetism in Ultrathin Metallic Ferromagnets: Towards Skyrmion Spintronics | 81.049 | 232,132 |
| DOE | DE-SC0012469 | Preservation of Alcator C-Mod data and support of ITER research through ITPA participation | 81.049 | 222,712 |
| DOE | DE-SC0012470 | MDSplus Development and Support | 81.049 | 410,287 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|---------------------------------------|----------------------------|--|--------|-------------------|
| DOE | DE-SC0012555 | Systems Biology Towards a Continuous Platform for Biofuels Production | 81.049 | 333,436 |
| DOE | DE-SC0012567 | Theoretical High Energy Physics | 81.049 | 836,960 |
| DOE | DE-SC0013307 | The Catalytic Reduction of Dinitrogen Under Mild Conditions | 81.049 | 14,192 |
| DOE | DE-SC0013499 | Compact, low-cost, light-weight, superconducting, ironless cyclotrons for hadron radiotherapy | 81.049 | 53,693 |
| DOE | IF-32302 | Methods Development for Exascale Simulation of SMRs | 81.CCC | 235,979 |
| DOE | PO 101633 | Investigation of Nucleate Boiling Suppression in Annular Flow using Advanced Imaging Diagnostics and CFD Simulations | 81.CCC | 61,220 |
| DOE | PO 563385-REVISION 9 | US CMS DAQ Subsystem | 81.CCC | 225,827 |
| DOE | PO-606667 | US CMS HCAL Subsystem | 81.CCC | 52,430 |
| DOE | PO-607300 | US CMS Software and Computing Subsystem (Data Operation) | 81.CCC | 106,132 |
| DOE | SUBCONTRACT NO. 3F-31144 | Joint Center for Energy Storage Research (JCESR) | 81.CCC | 1,803,042 |
| DOE | TBD | Explorations of Inertial-Confinement Fusion, High-Energy-Density Physics, and Laboratory Astrophysics | 81.112 | 53,230 |
| Total for Department of Energy | | | | 67,248,549 |
| TOTAL for Department of Energy | | | | 67,248,549 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|--|----------------------------|--|--------|-------------|
| DEPARTMENT OF HEALTH & HUMAN SERVICES | | | | |
| NIH | | | | |
| NIH | 1 DP5 OD019815-01 | Adapter-Layer RTK Signaling: Basic Understanding & Targeted Drug Resistance | 93.31 | 209,733 |
| NIH | 1 P50GM098792-01A1 | MIT Center for Integrative Synthetic Biology | 93.859 | 1,985,669 |
| NIH | 1-DP2-AG044279-01 | Early Warning Indicators of Tipping Points in Biological Systems | 93.310 | 391,347 |
| NIH | 1-DP2-CA195769-01 | Imaging Transcription with Single Molecule Resolution in Live Mammalian Cells | 93.31 | 448,100 |
| NIH | 1-DP2-DK102256-01 | A Novel Strategy for Combating Obesity: Reprogramming Neural Circuits | 93.847 | 302,216 |
| NIH | 1-DP2-OD007045-01 | Antibacterial Peptides and Zinc in Innate Immunity and Mammalian Physiology | 93.310 | 490,311 |
| NIH | 1-DP2-OD007124-01 | Engineered Regulated RNA Localization and Transport in Biological Systems | 93.310 | 659,361 |
| NIH | 1-DP2-OD008435-01 | Director's New Innovator Award: High-Throughput Nanoscale Approaches to Studying and Inhibiting Amyloid Toxicity | 93.310 | 309,574 |
| NIH | 1-F30-CA189333-01A1 | Characterization of GATOR1 signaling to mTORC1 and its role in cancer | 93.398 | 5,730 |
| NIH | 1-F31-AI104170-03 | Investigating the role of inflammasome activation in the control of T. gondii - GF for K. Cirelli | 93.855 | 43,452 |
| NIH | 1-F31-AR067615-01 | A Novel Approach to Osteogenesis Imperfecta_ The Collagen Protein Folding Problem | 93.846 | 15,861 |
| NIH | 1-F31-CA180271-02 | Characterization of MWS/DEN, a novel regulator of amino acid signaling to mTORC1 | 93.398 | 42,602 |
| NIH | 1-F31-CA183405-01A1 | Targeting tumor-microenvironment interaction to overcome leukemia chemoresistance | 93.398 | 39,826 |
| NIH | 1-F31-CA189437-01 | Improving targeted therapies through functional genomic approaches | 93.398 | 11,091 |
| NIH | 1-F31-GM115068-01 | Structural and Biochemical Characterization of the Nuclear Pore Complex Scaffold | 93.859 | 12,579 |
| NIH | 1-F32-AI109857-02 | Molecular determinants of N-linked glycosylation in Campylobacter jejuni | 93.855 | 51,451 |
| NIH | 1-F32-CA196149-01A1 | Multiscale Analysis of Cancer Cell Mechanics | 93.398 | 14,426 |
| NIH | 1-F32-DK101335-02 | Array development of anti-inflammatory peptoid-graft polymers for islet delivery | 93.847 | 51,605 |
| NIH | 1-F32-EB018155-01A1 | An injectable block copolymer synthetic cartilage | 93.286 | 47,075 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|-----------------------------|---|--------|-------------|
| NIH | 1-F32-EB019243-01A1 | Targetable and Ratiometric Fluorescent Sensors For Probing Brain Mobile Zinc | 93.286 | 19,075 |
| NIH | 1-F32-EY024857-01 | Dopaminergic modulation of visual cortical circuits | 93.867 | 41,959 |
| NIH | 1-F32-GM106550-02 | A Conjugated Polymer Fluorogenic Probe for Inorganic Polyphosphate - PDF for J. Kalow | 93.859 | 50,288 |
| NIH | 1-F32-GM108092-02 | Redox Controlled Reductive Elimination from Palladium II Complexes | 93.859 | 47,456 |
| NIH | 1-F32-GM108189-01A1 | Structural Investigation of Enzymes that Utilize Cobalamin and AdoMet Cofactors | 93.859 | 45,550 |
| NIH | 1-F32-GM110897-01A1 | Hybrid organometallic_carbon nanotube films for enhanced chemiresistive sensors | 93.859 | 20,605 |
| NIH | 1-F32-GM112197-01 | Direct Synthesis of 1_2_Benzisoxazoles Via Palladium Catalysis | 93.859 | 39,174 |
| NIH | 1-F32-GM112218-01 | Directed Arylation of Unprotected Anilines Enabled by Continuous Flow Technology | 93.859 | 43,948 |
| NIH | 1-F32-GM112272-01 | Synthetic Optimization of Organic Radicals for Dynamic Nuclear Polarization | 93.859 | 48,157 |
| NIH | 1-F32-GM113311-01 | Asymmetric Construction of Benzylic Stereocenters via Reductive Copper Catalysis | 93.859 | 28,006 |
| NIH | 1-F32-GM114976-01 | Determining the Molecular Mechanism of a Caulobacter DNA Replication Checkpoint | 93.859 | 15,196 |
| NIH | 1-F32-HD079143-02 | Stress effects on childhood brain development | 93.865 | 51,289 |
| NIH | 1-F32-HL122009-01A1 | Local delivery of TGF-beta inhibitors to treat mitral valve disease | 93.837 | 26,496 |
| NIH | 1-F32-MH107086-01 | Revealing the causal role of hippocampal dopamine signaling in spatial learning | 93.242 | 16,676 |
| NIH | 1-K99-CA187317-01 | Investigating Wnt and Lgr5 signaling as regulators of lung cancer heterogeneity | 93.398 | 118,038 |
| NIH | 1-K99-EB016690-01 | Role of cerebrospinal fluid dynamics in brain drug delivery | 93.286 | 83,166 |
| NIH | 1-K99-EY022924-02 | The causal role of inferior temporal cortex in object recognition | 93.867 | 87,040 |
| NIH | 1-K99-HL116654-01A1 REVISED | Control of Anoxia-Reoxygenation Responses by the O2-sensing Enzyme EGL-9 Pathway | 93.837 | 49,379 |
| NIH | 1-K99-HL-122514-01A1 | Dissecting epigenetic transitions at enhancer elements during cardiac development | 93.867 | 81,457 |
| NIH | 1-K99-MH104259-01 | Dissection of the neural circuitry of short-term memory in behaving mice | 93.242 | 77,534 |
| NIH | 1-R01-AI111395-01 | Characterization and Development of a Cross Spectrum Anti-Dengue Antibody | 93.855 | 366,308 |
| NIH | 1-R01AI111860-01 | T-cell-mediated targeting of therapeutics to HIV reservoirs | 93.855 | 165,758 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|-----------------------------|--|--------|-------------|
| NIH | 1-R01-AR065484-01A1 | Structure-Function of the Nuclear Envelope Bridge and its Role in Laminopathies | 93.846 | 189,056 |
| NIH | 1-R01-AT008764-01 | Antimicrobial discovery from metabolomics of nematode pathogen interactions | 93.213 | 388,960 |
| NIH | 1-R01-CA174795-01 | Localizing Immunotherapy to Improve Therapeutic Index | 93.395 | 157,028 |
| NIH | 1-R01-CA178636-01 | Intraoperative real time breast cancer margin assessment with nonlinear microscopy | 93.394 | 98,262 |
| NIH | 1-R01-CA184956-01 | (PQB6)Elucidating metastasis by real-time monitoring and tagging of CTCs in GEMMs | 93.396 | 378,892 |
| NIH | 1-R01-DC011339-01A1 | Brain Bases of Language Deficits in SLI and ASD | 93.173 | 24,015 |
| NIH | 1-R01-EB013231-01A1 | A 1.5-T superconducting solenoid-dipole magnet for a magic-angle spinning field | 93.286 | 1,998 |
| NIH | 1-R01-EB016101-01A1 | A New Device for Electrical & Chemical Modulation of Pathological Neural Activity | 93.286 | 512,245 |
| NIH | 1-R01-EB017205-01A1 | Critical Care Informatics | 93.286 | 402,154 |
| NIH | 1-R01-EB017755-01 | Mechanistic analysis of transport through the mucus barrier | 93.286 | 205,157 |
| NIH | 1-R01-GM101316-01A1 | Regulation and Function of snoRNA Genes | 93.859 | 166,168 |
| NIH | 1-R01-GM101420-01A1 | High throughput microfluidic intracellular delivery platform | 93.859 | 249,769 |
| NIH | 1-R01-GM104948-01 | Redesigning General Anesthesia | 93.310 | 176,132 |
| NIH | 1-R01-GM113708-01 | Comparative analysis and regulatory architecture of epigenomics datasets | 93.859 | 280,546 |
| NIH | 1-R01-HD067312-01 | Using Cognitive Neuroscience to Predict Dyslexia among Kindergarten Children | 93.865 | 109,421 |
| NIH | 1-R01-HL121386-01A1 | Characterizing Mechanisms of Sickle Cell Crisis via Dynamic Optical Assay | 93.839 | 193,649 |
| NIH | 1R01HL121386-01A1 REVISED | Characterizing Mechanisms of Sickle Cell Crisis via Dynamic Optical Assay | 93.839 | 149,692 |
| NIH | 1-R01-HL121386-01A1 REVISED | Characterizing Mechanisms of Sickle Cell Crisis via Dynamic Optical Assay | 93.839 | 44,422 |
| NIH | 1-R01-MH106469-01 | Synaptic pathophysiology of the 16p11.2 microdeletion mouse model | 93.242 | 55,967 |
| NIH | 1-R01-MH106497-01 | Delineating the Anatomical and Functional Circuitry Underlying Social Learning | 93.242 | 144,223 |
| NIH | 1-R01-NS086804-01A1 | Fiber Inspired Neural Probes for the Multifunctional Dynamic Brain Mapping | 93.853 | 75,316 |
| NIH | 1-R01-NS089076-01A1 | Epigenetic pathology and therapy in Huntington's disease | 93.853 | 26,197 |
| NIH | 1-R13-CA186669-01 | 13th International Workshop on Radiation Damage to DNA | 93.395 | 6,500 |
| NIH | 1-R21-AI084032-01A1 | High-resolution analysis of diversity and variation in the human microbiome | 93.855 | 8 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NIH | 1-R21-AI100190-01 | MMDx: A rapid multiplexed matrix code diagnostic for real time epidemiology | 93.855 | 19,982 |
| NIH | 1-R21-AI112711-01 | Sulfur DNA modifications in gut microbes confer resistance to oxidative stress | 93.855 | 141,691 |
| NIH | 1-R21-AI114930-01 | Inhibiting Toxoplasma growth by disrupting its access to host small molecules | 93.855 | 147,799 |
| NIH | 1-R21-EB018529-01A1 | PEG-Branch-Nitroxide Nanostructured Organic MRI Contrast Agents | 93.286 | 44,651 |
| NIH | 1-R21-EY023053-02 | Time delimited neural silencing to dissect the basis of visual object perception | 93.867 | 164,895 |
| NIH | 1-R21-MH092564-01A1 | Learned regulation of the limbic network via combined EEG and fMRI | 93.242 | 26,491 |
| NIH | 1-R21-MH102470-02 | Amino acid neurotransmitter sensors for MRI | 93.242 | 171,548 |
| NIH | 1-R21-NS091982-01 | New technologies for in vivo spectral resolved high speed multiphoton microscopy | 93.853 | 10,221 |
| NIH | 1-R24-MH106075-01 | Vascular Interfaces for Brain Imaging and Stimulation | 93.242 | 412,605 |
| NIH | 1-R33-CA191143-01 | Single cell growth assay for residual cells in acute lymphoblastic leukemia | 93.394 | 14,824 |
| NIH | 1-R56-AI104274-01 | Nanowell-based single-cell technology for characterizing clinical samples ex vivo | 93.855 | 122,385 |
| NIH | 1-RF1-AG042978-01 | Epigenomic Characterization of Alzheimer's Disease Neurons from iPSCs | 93.866 | 18,756 |
| NIH | 1-RF1-AG047661-01 | Examination of neural circuits underlying mood disorders in Alzheimer's disease | 93.866 | 278,365 |
| NIH | 1-RF1-AG048029-01 | Alzheimers Disease Risk Genes in Human Microglia and Neurons Derived from iPSCs | 93.866 | 230,553 |
| NIH | 1-U01-CA184897-01 | Dynamics of Gene and Isoform Regulation during EMT and tumor progression | 93.396 | 578,158 |
| NIH | 1-U01-CA184898-01 | Embryonal Brain Tumor Networks | 93.396 | 304,953 |
| NIH | 1-U01-HG007610-01 | Epigenomic variation atlas across human tissues and individuals in GTEx | 93.172 | 472,605 |
| NIH | 1U01MH106011-01 | Ultra-Multiplexed Nanoscale In Situ Proteomics for Understanding Synapse Types | 93.242 | 221,959 |
| NIH | 1-U01-MH106011-01 | Ultra-Multiplexed Nanoscale In Situ Proteomics for Understanding Synapse Types | 93.242 | 641,866 |
| NIH | 1-U01-MH106018-01 | Novel technologies for nontoxic transsynaptic tracing | 93.242 | 552,140 |
| NIH | 1-U01-NS0904380-01 | Next generation high-throughput random access imaging, in vivo | 93.853 | 277,142 |
| NIH | 1-U01-NS090451-01 | Calcium sensors for molecular fMRI | 93.853 | 412,479 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NIH | 1-U01-NS090473-01 | Cortical circuits and information flow during memory-guided perceptual decisions | 93.853 | 483,051 |
| NIH | 1-UH2-TR000496-01 | All-Human Microphysical Model of Metastasis Therapy | 93.350 | 11,569 |
| NIH | 2-P01-CA026731-35A1 | Endogenous Nitrite Carcinogenesis In Man | 93.393 | 746,799 |
| NIH | 2-P01-CA42063-26 | Characterization of Pathways Controlling Cancer at the Level of Gene Regulation | 93.393 | 1,056,220 |
| NIH | 2-P30-CA014051-44 | Dummy Parent | 93.397 | 37,103 |
| NIH | 2-P30-CA14051-44 | Dummy Parent | 93.395 | 325,009 |
| NIH | 2-P41-EB002026-39 | MIT/Harvard Center for Magnetic Resonance | 93.286 | 30,518 |
| NIH | 2-R01-AI080621-06A1 | Toxoplasma proteins that modulate the host cell | 93.855 | 26,107 |
| NIH | 2-R01-CA021615-38 | Mutagenesis and Repair of DNA | 93.393 | 57,005 |
| NIH | 2-R01-CA075289-17 | Optical Biopsy Using Coherence Tomography | 93.394 | 44,872 |
| NIH | 2-R01-CA096504-11 | Engineered Antibody EGFR Antagonist Cancer Therapeutics | 93.395 | 249,664 |
| NIH | 2-R01-EB001965-10 | High Magnetic Field, Time Domain Magnetic Resonance Spectrometers | 93.286 | 59,782 |
| NIH | 2-R01-EB002804-23A1 | High Field DNP and EPR in Biological Systems | 93.286 | 40,141 |
| NIH | 2-R01-EB002887-04A2 | MgB2 0.5-T/800-mm Whole-Body MRI Magnet: Phase I | 93.286 | 131 |
| NIH | 2-R01-EB003151-35A1 | Solid State NMR Studies of Peptides and Proteins | 93.286 | 7,839 |
| NIH | 2-R01-EB004866-05A1 | High Frequency Gyrotron for DNP/NMR Research | 93.286 | 4,319 |
| NIH | 2-R01-EY007023-25A1 | Cell-specific circuits and contextual modulation in visual cortex | 93.867 | 30,224 |
| NIH | 2-R01-EY011289-29A1 | Novel Diagnostics With Optical Coherence Tomography | 93.867 | 37,962 |
| NIH | 2-R01-EY017656-06A1 | In Vivo Imaging of Neuronal Plasticity in Visual Cortex | 93.867 | 218,295 |
| NIH | 2-R01-GM029595-36 | Ribonucleotide Reductase: Structure and Function | 93.859 | 224,003 |
| NIH | 2-R01-GM031030-33 | Molecular Genetics of Rhizobium Nodulation Plasmids | 93.859 | 334,703 |
| NIH | 2-R01-GM046059-23 | Catalytic Methods for Organic Synthesis | 93.859 | 699,443 |
| NIH | 2-R01-GM050895-18 | Cell-Cell Signaling, Gene Expression, and Horizontal Gene Transfer in Bacillus | 93.859 | 349,490 |
| NIH | 2-R01-GM058160-17 | Late Transition Metal Catalysts for Organic Synthesis | 93.859 | 522,284 |
| NIH | 2-R01-GM068957-11 | Controlling gene expression fluctuations during development and stem cell differentiation | 93.859 | 282,173 |
| NIH | 2-R01-GM082209-05A1 | Computational Design of Inhibitor Specificity | 93.859 | 93,760 |
| NIH | 2-R01-GM095843-05 | Molecules for Dynamic Nuclear Polarization and NMR Structure Determination | 93.859 | 81,890 |
| NIH | 2-R01-MH085802-06 | MicroRNA mechanisms of Rett Syndrome | 93.242 | 64,890 |
| NIH | 2-R01-RR015034-06 | Phase 3A of a 3-phase 1.3-GHz LTS/HTS NMR Magnet | 93.389 | 26,685 |
| NIH | 2T32GM008334-26 | Interdepartmental Biotechnology Training Program | 93.859 | 731,744 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NIH | 2-T32-GM087237-06 | Graduate Training in Computational and Systems Biology | 93.859 | 244,288 |
| NIH | 3-R01-EB017097-10S1 | Phase 3A of a 3-phase 1.3-GHz LTS/HTS NMR Magnet | 93.286 | 130,743 |
| NIH | 3-R01-EY011894-15S1 | A Molecular Genetic Analysis of Cortical Plasticity | 93.867 | 224,151 |
| NIH | 3-R01-EY020517-01S1 | Project Prakash: Development of Object Perception After Late Sight Onset | 93.867 | 4,102 |
| NIH | 3-R01-GM049039-20S1 | Vascular Drug Delivery | 93.859 | 646,178 |
| NIH | 3-R01GM097241-03S1 | Inhibition of Prokaryote-Specific Saccharide Biosynthesis in Microbial Pathogens | 93.859 | 240,132 |
| NIH | 3-R01-GM104948-03S1 | Redesigning General Anesthesia | 93.310 | 837,543 |
| NIH | 3-R01-MH102441-02S1 | Dissecting the Neural Circuits Encoding Positive and Negative Valence | 93.242 | 307,719 |
| NIH | 3-R37-GM057073-17S1 | Structure-Function Relationship of Glycosaminoglycans | 93.859 | 51,043 |
| NIH | 3-T32-HG004947-05S1 | MIT/Whitehead/Broad Computational Genetics Training Program | 93.172 | 120,243 |
| NIH | 3-U01-HG007610-01S1 | Epigenomic variation atlas across human tissues and individuals in GTEX | 93.172 | 166,528 |
| NIH | 3-U01-HG007610-02S1 | Epigenomic variation atlas across human tissues and individuals in GTEX | 93.172 | 10,845 |
| NIH | 3-U54-CA163109-04S1 | Impact of Cellular and Extracellular Host Components on Tumor Progression | 93.397 | 65,073 |
| NIH | 3-UH2-TR000496-02S1 | All-Human Microphysical Model of Metastasis Therapy | 93.350 | 54,853 |
| NIH | 4-R00-GM105913-03 | Probing the function of translational pausing in bacterial protein synthesis | 93.859 | 169,141 |
| NIH | 4-R01-RR015034-10REVISED | Phase 3A of a 3-phase 1.3-GHz LTS/HTS NMR Magnet | 93.389 | 371,608 |
| NIH | 4-R33-A1100190-03 | MMDX: A rapid multiplexed matrix code diagnostic for real time epidemiology | 93.855 | 273,221 |
| NIH | 4-R37-MH087027-06 | Cortical Circuits for Attention and Decisions | 93.242 | 178,337 |
| NIH | 4-UH3-TR000496-03 REVISED | All-Human Microphysical Model of Metastasis Therapy | 93.350 | 890,467 |
| NIH | 5 P01 HD061315-05 | Maternal and Child Health in Poor Countries: Evidence from Randomized Evaluations | 93.865 | 247,432 |
| NIH | 5 T32 GM007287-40 | Pre-Doctoral Grant in the Biological Sciences | 93.859 | 1,865,919 |
| NIH | 5_R01-DE013023-15R | Novel Polymers for Tissue Engineering | 93.121 | 163,576 |
| NIH | 5-DP1-NS087724-02 | Millisecond-Timescale Whole-Brain Neural Activity Mapping in Health and Disease | 93.310 | 1,281,997 |
| NIH | 5-DP5-OD017865-02 | Post-transcriptional regulation of gene expression in neuromuscular disease | 93.31 | 464,758 |
| NIH | 5-F31-AG044061-03 | A novel developmental pathway for genes involved in Alzheimer's Disease - GF for K. Villa | 93.866 | 40,935 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NIH | 5-F31-AG044064-02 | Understanding the mechanisms that govern Bst-1 induction upon caloric restriction | 93.866 | 14,699 |
| NIH | 5-F31-CA165735-02 | Signaling Networks in Glioblastoma Drug Resistance - GF J. McFalline | 93.398 | 330 |
| NIH | 5-F31-CA167872-04 | Characterization of novel regulators of amino acid-sensitive mTORC1 signaling - GF for L. Schweitzer | 93.398 | 42,713 |
| NIH | 5-F31-MH098508-02 | Closed-Loop Control of Hippocampal Output During a Working Memory Task - GF J. Siegel | 93.282 | 2,428 |
| NIH | 5-F31-MH099782-02 | Characterizing in-task corticostriatal circuit operation during habit learning | 93.242 | 40,906 |
| NIH | 5-F32-AI112359-02 | Longitudinal analysis of antibody responses to HIV-1: mapping function to genotype | 93.855 | 54,895 |
| NIH | 5-F32-AR062931-03 | Data-Driven Modeling of Signaling Dysregulation in Rheumatoid Arthritis - PDF D. Jones | 93.846 | 1,433 |
| NIH | 5F32CA157197-03 | Array of Resistive Sensors for Detecting Lung Cancer in Exhaled Air - PDF for K. Mirica | 93.398 | 38,056 |
| NIH | 5-F32-CA165657-02 | Bacterial Mimicells for Cancer Therapeutics | 93.398 | 52,857 |
| NIH | 5-F32-CA165700-03 | Role of Phospho-Tyrosine Binding in Mena-Driven Metastasis - PDF for R. McConnell | 93.398 | 41,351 |
| NIH | 5-F32-CA168057-03 | New Approaches to the Selective Targeting of Cancer-associated Fibroblasts - PDF J. Van Deventer | 93.398 | 52,875 |
| NIH | 5-F32-CA177094-02 | Peptide-mediated delivery of siRNA for treatment of ovarian cancer | 93.398 | 54,727 |
| NIH | 5-F32-CA180586-02 | Modulating AhR in tumor and lymphoid microenvironments via local drug delivery | 93.398 | 53,861 |
| NIH | 5-F32-CA183400-2 | Two-Photon Fluorescence Lifetime Microscopy for Breast Cancer Margin Assessment | 93.398 | 48,685 |
| NIH | 5-F32-DC013703-02 REV | Auditory processing of reverberation: perceptual and computational investigations | 93.173 | 52,682 |
| NIH | 5-F32-DK095529-03 | Exosomes: Genetic delivery vehicles to enhance engineered hepatic tissue - PDF - K. Christine | 93.847 | 117 |
| NIH | 5-F32-DK095726-03 | Regulation of Heme Synthesis and Mitochondrial Physiology by the ClpX Unfoldase - PDF - J. Kardon | 93.847 | 56,037 |
| NIH | 5-F32-DK097858-02 | Nanolayer Assemblies for Temporal Cytokine Therapy in Diabetic Ulcer Healing - PDF for Almquist | 93.847 | 8,582 |
| NIH | 5-F32-EB014682-02 | Fluorous-Templated J-Aggregates as Smart NIR Imaging Agents | 93.286 | 12,551 |
| NIH | 5-F32-EB017614-02 | LbL Nanotechnologies for Synergistic Therapy of Advanced Ovarian Carcinoma | 93.286 | 52,050 |
| NIH | 5-F32-EB017625-02 REVISED | Lipidoid Nanoparticles with Simultaneous Multi-Gene Regulation for Cancer Therapy | 93.286 | 8,765 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NIH | 5-F32-EB018132-02 | Engineering spatially distinct drug delivery systems for islet therapy | 93.286 | 39,824 |
| NIH | 5-F32-EY020692-03 | Interactions Between LIP - PDF for G. Mulliken | 93.867 | -47 |
| NIH | 5-F32-EY022264-03 | Role of glial glutamate transporters in V1 plasticity and development - PDF for J. Petravic | 93.867 | 58,894 |
| NIH | 5-F32-EY023523-02 | Modulation of cortical processing by engagement with the sensory environment | 93.867 | 12,849 |
| NIH | 5-F32-EY024483-02 | Anatomical constraints on cognition and how they develop | 93.867 | 48,901 |
| NIH | 5-F32-GM099187-03 | The Direct Oxidative Trifluoromethylation of Simple Heteroaromatic Systems - PDF - Nathan Jui | 93.859 | 3,921 |
| NIH | 5F32GM101860-03 | Quantitative RNA affinity landscapes: implications for development and disease - PDF for N. Lambert | 93.859 | 35,433 |
| NIH | 5-F32-GM102992-02 | A systems approach for profiling kinase activities in the DNA damage response - PDF for L. Peterson | 93.859 | 128 |
| NIH | 5-F32-GM106629-04 | Experimental evolution recapitulating adaptation after horizontal gene transfer | 93.859 | 46,425 |
| NIH | 5-F32-GM108181-02 | A Cascade Reaction to Synthesize Ladder Polyethers with 1,3 Diaxial Methyl Groups | 93.859 | 50,482 |
| NIH | 5-F32-GM108294-02 | Development of New Metal_Catalyzed Hydroacylation and Hydroarylation Processes - PDF D. Cohen | 93.859 | 50,855 |
| NIH | 5-F32-GM109516-02 | Multicolor Fluorescent Sensors for Imaging Zinc Dynamics in Cells | 93.859 | 46,957 |
| NIH | 5-F32-GM109562-02 | Genome-wide identification of mRNA localization motifs and factors | 93.859 | 50,610 |
| NIH | 5-F32-HD072748-03 | Computational models of the acquisition of verb meaning - PDF - J. Hartshorne | 93.865 | 49,426 |
| NIH | 5-F32-HD075427-03 | Behavioral, fMRI, and Anatomical MRI Investigations of Attention in Autism - PDF for J. Fischer | 93.865 | 51,023 |
| NIH | 5-F32-HD079169-02 | How connectivity determines function in the mature and developing human brain | 93.865 | 54,436 |
| NIH | 5-F32-HL110484-03 | Alternative splicing in the vascular response to pathological shear stress -PDF P. Murphy | 93.837 | 37,674 |
| NIH | 5-F32-MH095354-03 | Development of Procedural Memory Systems in Children with and without ADHD- PDF A. Finn | 93.282 | -1,593 |
| NIH | 5-K99-CA169512-02 | Investigating microRNA miR-34a in lung cancer development and therapy | 93.398 | 13,452 |
| NIH | 5-K99-ES022639-02 | Impact of Infection and Inflammation on the Toxicity of Environmental Chemicals | 93.867 | 87,961 |
| NIH | 5-K99-EY022671-02 | The role of cortical feedback in visual face processing | 93.867 | 16,111 |
| NIH | 5-P01-CA026731-34 | Endogenous Nitrite Carcinogenesis in Man | 93.393 | -2,452 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NIH | 5-P01-CA026731-34 REVISED | Endogenous Nitrite Carcinogenesis in Man | 93.393 | -10 |
| NIH | 5-P01-CA42063-29 | Characterization of Pathways Controlling Cancer at the Level of Gene Regulation | 93.393 | 408,917 |
| NIH | 5-P01-HD061315-04 | Maternal and Child Health in Poor Countries: Evidence from Randomized Evaluations | 93.865 | -11,209 |
| NIH | 5-P30-CA14051-42 | Administration | 93.395 | 8,331 |
| NIH | 5-P30-CA14051-43 | Administration | 93.395 | 3,246,945 |
| NIH | 5-P30ES002109-34 | MIT Center for Environmental Health Sciences | 93.113 | 1,120,780 |
| NIH | 5-P30ES002109-35 | MIT Center for Environmental Health Sciences | 93.113 | 448,654 |
| NIH | 5-P30-EY002621-33 | Core - Vision Processes | 93.867 | 5,952 |
| NIH | 5-P30-EY002621-36 | Core - Vision Processes | 93.867 | 100,547 |
| NIH | 5-P30-EY002621-37 | Core - Vision Processes | 93.867 | 730,805 |
| NIH | 5-P41-EB002026-38 | Harvard/MIT Center for Magnetic Resonance | 93.286 | -2 |
| NIH | 5P41EB002026-40 | MIT/Harvard Center for Magnetic Resonance | 93.286 | 1,083,178 |
| NIH | 5-P41-EB015871-27 | MIT Laser Biomedical Research Center (P41-RR02594) | 93.286 | 3,310 |
| NIH | 5P41EB015871-29 | MIT Laser Biomedical Research Center (P41-RR02594) | 93.286 | 496,374 |
| NIH | 5-P50-GM068762-10 | Systems Biology of Cell Decision Processes | 93.859 | 118,419 |
| NIH | 5-P50-GM068762-10 REVISED | Systems Biology of Cell Decision Processes | 93.859 | 639,628 |
| NIH | 5-R00-AG045144-04 | Regulation of the Intestinal Stem Cell Niche in Aging | 93.866 | 226,712 |
| NIH | 5-R01-AG011119-23 | Function of SIRT1 in Growth and Reproduction | 93.866 | 555,172 |
| NIH | 5-R01-AG015339-15 | Function of Mammalian SIRT1 in Aging | 93.866 | 427,967 |
| NIH | 5-R01-AI016892-36 | Proteolytic and chaperone machines implicated in virulence and disease | 93.855 | 518,161 |
| NIH | 5-R01-AI080621-05 REVISED | Toxoplasma Strain-Specific Modulation of Mouse Immune Cells | 93.855 | 68,589 |
| NIH | 5-R01A1095109-05 | Engineered lipid vesicles as potent vaccine vectors for HIV | 93.855 | 272,634 |
| NIH | 5-R01A111860-02 | T-cell-mediated targeting of therapeutics to HIV reservoirs | 93.855 | 240,179 |
| NIH | 5-R01-AR060331-03 | Cartilage Repair Using Self Assembling Peptide Scaffolds | 93.846 | 271,715 |
| NIH | 5-R01CA021615-37 | Mutagenesis and Repair of DNA | 93.393 | 342,818 |
| NIH | 5-R01-CA034992-33 | Understanding and Improving Platinum Anticancer Drugs | 93.395 | 678,466 |
| NIH | 5-R01-CA075289-16 REVISED | Optical Biopsy Using Coherence Tomography | 93.395 | 20,561 |
| NIH | 5-R01-CA075289-18 | Optical Biopsy Using Coherence Tomography | 93.394 | 196,502 |
| NIH | 5-R01-CA096504-13 | Engineered Antibody EGFR Antagonist Cancer Therapeutics | 93.395 | 376,119 |
| NIH | 5-R01-CA101830-09 | Foundations of Pretargeted Radioimmunotherapy | 93.395 | 75,681 |
| NIH | 5-R01-CA108854-09 | Role of IL10 and TGFB1 in Colon Cancer | 93.393 | 65,426 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NIH | 5-R01-CA133404-08 | Stress and Proliferation States Impact MicroRNA-Mediated Regulation in Cancer | 93.393 | 486,775 |
| NIH | 5-R01-CA140476-05 | Nanoparticle-Mediated Support of Cancer Immunotherapy | 93.394 | 0 |
| NIH | 5-R01-CA149261-05 | The influence of DNA repair on inflammation associated carcinogenesis | 93.393 | 258,462 |
| NIH | 5-R01-CA155320-05REVISED | MicroRNA Expression Profiling Circuits for Detection and Destruction of Cancer | 93.395 | 511,548 |
| NIH | 5-R01-CA160860-04 | Developing Direct Small-Molecule Probes of Myc-Dependent Transcription | 93.393 | 225,388 |
| NIH | 5-R01-CA168653-03 | Regulation of glucose metabolism to allow tumor initiation and growth | 93.396 | 267,745 |
| NIH | 5-R01-CA172164-03 | Targeting immunosuppression blockade to T cells for cancer immunotherapy | 93.395 | 232,289 |
| NIH | 5-R01-CA173712-03 REVISED | Genetic circuits for high-throughput, multi-sensory, live cell microRNA profiling | 93.396 | 447,073 |
| NIH | 5-R01-CA174795-03 | Localizing Immunotherapy to Improve Therapeutic Index | 93.395 | 200,556 |
| NIH | 5-R01-CA178636-02 | Intraoperative real time breast cancer margin assessment with nonlinear microscopy | 93.394 | 226,133 |
| NIH | 5-R01-CA185020-02 | (PQB3) Investigating innate immunosurveillance of oncogene-induced danger signals | 93.396 | 394,075 |
| NIH | 5-R01-CA186568-05 | Spatially-resolved proteomic mapping of living cells | 93.310 | 344,486 |
| NIH | 5-R01-DA028299-05 | MRI Probes for Functional Imaging ofPlasticity Signals in the Brain | 93.279 | 88,166 |
| NIH | 5-R01-DA029639-04 | Novel Platforms for Systematic Optical Control of Complex Neural Circuits in Vivo | 93.279 | -4,861 |
| NIH | 5-R01-DC000117-35 | Hearing Aid Research | 93.173 | 398,389 |
| NIH | 5-R01-DC000238-30 REVISED | Experimental - Theoretical Studies of Cochlear Mechanisms | 93.173 | 391,429 |
| NIH | 5-R01-DC009183-08 | Neuronal Mechanisms of Motor Exploration and the Emergence of Structured Behavior | 93.173 | 367,957 |
| NIH | 5-R01-DC011339-05 | Brain Bases of Language Deficits in SLI and ASD | 93.173 | 786,246 |
| NIH | 5-R01-DE013023-14 | Novel Polymers for Tissue Engineering | 93.121 | 160,812 |
| NIH | 5-R01-DE016516-10 | High Throughput Craniofacial Tissue Engineering | 93.121 | 223,532 |
| NIH | 5-R01-DE019523-13 | Bioengineering Polymers for Parsing Cell Responses | 93.121 | 4,039 |
| NIH | 5-R01-DK087984-05 | HRI-eIF2a Phosphorylation Signaling in Oxidative Stress and Erythropoiesis | 93.847 | 355,913 |
| NIH | 5-R01-EB001659-10 | Integrating Data, Models, and Reasoning in Critical Care | 93.286 | 23,525 |
| NIH | 5-R01-EB001960-36 REVISED | Solid State NMR Studies of Membrane Proteins | 93.286 | 80,816 |
| NIH | 5-R01-EB001960-38 | Solid State NMR Studies of Membrane Proteins | 93.286 | 275,606 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NIH | 5-R01-EB001965-12 | High Magnetic Field, Time Domain Magnetic Resonance Spectrometers | 93.286 | 386,490 |
| NIH | 5-R01-EB002804-26 | High Field DNP and EPR in Biological Systems | 93.286 | 541,694 |
| NIH | 5-R01-EB002887-06 REVISED | MgB2 0.5-T/800-mm Whole-Body MRI Magnet: Phase I | 93.286 | 50,527 |
| NIH | 5-R01-EB003151-38 | Solid State NMR Studies of Peptides and Proteins | 93.286 | 489,121 |
| NIH | 5-R01-EB004866-08 REVISED | High Frequency Gyrotron for DNP/NMR Research | 93.286 | 193,408 |
| NIH | 5-R01-EB006365-10 | Microchip Drug Delivery System | 93.286 | 0 |
| NIH | 5-R01-EB010246-04 | Perfused 3D Tissue Surrogates for Complex Cell-Cell Communication Systems | 93.310 | 70,650 |
| NIH | 5-R01-EB010246-05 | Perfused 3D Tissue Surrogates for Complex Cell-Cell Communication Systems | 93.310 | 46,285 |
| NIH | 5-R01-EB013231-03 | A 1.5-T superconducting solenoid-dipole magnet for a magic-angle spinning field | 93.286 | 200,281 |
| NIH | 5-R01-EB016101-03 | A New Device for Electrical & Chemical Modulation of Pathological Neural Activity | 93.286 | 336,571 |
| NIH | 5-R01-EB017755-02 | Mechanistic analysis of transport through the mucus barrier | 93.286 | 142,917 |
| NIH | 5-R01-ES015339-07 | Protein Kinase Signaling and Cell Cycle Control | 93.113 | 724,030 |
| NIH | 5-R01-ES015818-07 | Mechanism of Eukaryotic Environmental Mutagenesis | 93.113 | 395,637 |
| NIH | 5-R01-ES016313-07 | The Environment as a Variable to Calibrate Mouse Models of Human Disease | 93.113 | 282,130 |
| NIH | 5-R01-ES022872-23 | Eukaryotic DNA Alkylation Repair | 93.113 | 342,058 |
| NIH | 5-R01-EY007023-24 | Cell-Specific Circuits in Visual Cortex | 93.867 | 201 |
| NIH | 5-R01-EY011289-28 | Novel Diagnostics With Optical Coherence Tomography | 93.867 | 411,976 |
| NIH | 5-R01-EY011894-17 | A Molecular Genetic Analysis of Cortical Plasticity | 93.867 | 143,233 |
| NIH | 5-R01-EY013455-16 REVISED | Feedback of Peripheral Visual Information to Foveal Cortex | 93.867 | 277,740 |
| NIH | 5-R01-EY014074-18 | Developmental Regulation of Glutamate Receptor Function | 93.867 | -54,036 |
| NIH | 5-R01-EY014970-10REVISED | Construction of Invariant Shape Selectivity in the Ventral Visual Stream | 93.867 | 165,424 |
| NIH | 5-R01-EY015834-10 | Compounds blocking crystallin aggregation in vitro; path to anti-cataract agents | 93.867 | 241,200 |
| NIH | 5-R01-EY017292-10 | Neural Mechanisms of Selective Attention | 93.867 | 297,431 |
| NIH | 5-R01-EY017921-07 | Neural mechanisms mediating visual search | 93.867 | 275,325 |
| NIH | 5-R01-EY019271-05 | Haptic Virtual Environments to Enhance Navigation and Mobility of Blind People | 93.867 | 350,685 |
| NIH | 5-R01-EY020484-05 REVISED | The gist of the space: A space centered approach to visual scene perception | 93.867 | 379,954 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NIH | 5-R01-EY020517-05 | Project Prakash: Development of Object Perception After Late Sight Onset | 93.867 | 431,670 |
| NIH | 5-R01-EY021473-03 | Making Sense of Visual Search | 93.867 | 294,617 |
| NIH | 5-R01-EY023037-02 | Behavioral consequences and cellular substrates of plasticity in visual cortex | 93.867 | 424,732 |
| NIH | 5-R01-EY023173-03 | High-throughput robotic analysis of integrated neuronal phenotypes | 93.867 | 709,306 |
| NIH | 5-R01-GM017151-41 | Structure and Function of Transfer Ribonucleic Acids | 93.859 | 199,017 |
| NIH | 5-R01-GM024663-38 | Genetic Analysis of Nematode Egg Laying and Co-regulated Behavioral Systems | 93.859 | 484,252 |
| NIH | 5-R01-GM029595-35 | Ribonucleotide Reductase: Structure and Function | 93.859 | 56,428 |
| NIH | 5-R01-GM031030-32 | Molecular Genetics of Rhizobium Nodulation Plasmids | 93.859 | 45,095 |
| NIH | 5-R01-GM032134-32 | Nonheme Diiron Centers and the Biological Oxidation of Hydrocarbons | 93.859 | 273,392 |
| NIH | 5-R01-GM034277-28 | Regulation of mRNA Processing | 93.859 | -320 |
| NIH | 5-R01-GM034277-30 | Regulation of mRNA Processing | 93.859 | 403,656 |
| NIH | 5-R01-GM039334-28 | N-linked Protein Glycosylation: Pathways and Processes | 93.859 | 371,012 |
| NIH | 5-R01-GM046059-22 | Catalytic Methods for Organic Synthesis | 93.859 | 97,997 |
| NIH | 5-R01-GM049224-21 | Protein Recognition for Remodeling and Degradation by Bacterial AAA+ ATPases | 93.859 | 30,443 |
| NIH | 5-R01-GM052339-21 | Initiation of DNA Replication of Yeast Chromosomes | 93.859 | 334,957 |
| NIH | 5R01GM056800-20 | Regulation of MITOSIS by Proteolysis in Yeast | 93.859 | 239,088 |
| NIH | 5-R01-GM058160-16 | Late Transition Metal Catalysts for Organic Synthesis | 93.859 | 57,985 |
| NIH | 5-R01-GM059426-15 | Catalytic Stereoselective Olefin Metathesis Reactions | 93.859 | 716,268 |
| NIH | 5-R01-GM059426-16 | Catalytic Stereoselective Olefin Metathesis Reactions | 93.859 | -143,656 |
| NIH | 5-R01-GM062207-12 REVISED | Regulation of the meiotic cell cycle | 93.859 | 66 |
| NIH | 5-R01-GM062207-14 | Regulation of the meiotic cell cycle | 93.859 | 287,758 |
| NIH | 5-R01-GM063857-12 | ELECTROPORATION MECHANISM, MICRODOSIMETRY AND INCREASINGLY REALISTIC CELL MODELS | 93.859 | 177,258 |
| NIH | 5-R01-GM065418-08 | Packing and Electrostatic Effects on Folding and Binding | 93.859 | 0 |
| NIH | 5-R01-GM065519-14 | Imaging Mobile Zinc Biology | 93.859 | 237,297 |
| NIH | 5-R01-GM069857-08 | Complex Metallocluster Structure and Assembly | 93.859 | -546 |
| NIH | 5-R01-GM069857-10 | Complex Metallocluster Structure and Assembly | 93.859 | 223,280 |
| NIH | 5R01GM072566-10 REVISED | Synthetic Strategies based on expoxide coupling reactions | 93.859 | 270,755 |
| NIH | 5-R01-GM072670-09 REVISED | Site-specific protein labeling in cells with engineered Lp/A | 93.859 | -5,673 |
| NIH | 5-R01-GM074825-09 | Synthesis and Study of Complex Natural Products | 93.859 | 224,184 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NIH | 5-R01-GM077537-07 | High Resolution Assembly Structure of The Nuclear Pore Complex | 93.859 | 10,833 |
| NIH | 5-R01-GM077537-08 | High Resolution Assembly Structure of The Nuclear Pore Complex | 93.859 | 443,466 |
| NIH | 5-R01-GM081393-07 | MEI12_Y_Me_Fe_Mn_Cluster Assembly and Maintenance in Ribonucleotide Reductase | 93.859 | 331,039 |
| NIH | 5-R01-GM081393-07 REVISED | MEI12_Y_Me_Fe_Mn_Cluster Assembly and Maintenance in Ribonucleotide Reductase | 93.859 | 75,794 |
| NIH | 5-R01-GM081871-07 | Structure based prediction of the interactome | 93.859 | 333,540 |
| NIH | 5-R01-GM082209-04 | Computational Design of Inhibitor Specificity | 93.859 | -8,385 |
| NIH | 5-R01-GM082209-06 | Computational Design of Inhibitor Specificity | 93.859 | 270,667 |
| NIH | 5-R01-GM082899-08 | Cell Cycle Regulation in Caulobacter Crescentus | 93.859 | 245,247 |
| NIH | 5-R01-GM084477-08 | Molecular Genetics of Innate Immunity in C. elegans | 93.859 | 316,260 |
| NIH | 5-R01-GM085319-08 | Function of Sequence-Specific Regulators of RNA Splicing | 93.859 | 234,189 |
| NIH | 5-R01-GM085457-04 | High Throughput Monitoring of Mass, Density and Fluorescence of Single Cells | 93.859 | 242,355 |
| NIH | 5-R01-GM087465-04 | Analysis of poly(ADP-ribose) function in the cytoplasmic stress response | 93.859 | 267,271 |
| NIH | 5R01GM089732-06 REVISED | Synthesis and Study of Dimeric Diketopiperazine Alkaloids Years 5 to 8 | 93.859 | 517,727 |
| NIH | 5-R01-GM089903-05 | A Systems Biology Approach to Reveal Huntington's Disease Mechanisms | 93.859 | 391,491 |
| NIH | 5-R01-GM090194-04 | Cell-Based Sensors for Measuring Impact of Microsystems on Cell Physiology | 93.859 | 65,109 |
| NIH | 5-R01-GM094303-04 | Functional Consequences of Ribosome Heterogeneity | 93.859 | 209,735 |
| NIH | 5-R01-GM095733-04 REVISED | Probing the real-time kinetics and steady-state dynamics of gene expression | 93.859 | 91,250 |
| NIH | 5-R01-GM095765-05 | Characterization of Gradient-Responsive Genetic Programs Using Light Sensors | 93.859 | 185,595 |
| NIH | 5R01GM095843-04 REVISED | Radicals and Polyradicals for Dynamic Nuclear Polarization | 93.859 | 211,240 |
| NIH | 5-R01-GM096466-05 | Very large datasets and new models to predict and design protein interactions | 93.310 | 321,621 |
| NIH | 5-R01-GM097241-02REVISED | Inhibition of prokaryote-specific saccharide biosynthesis in microbial pathogens | 93.859 | -1,299 |
| NIH | 5-R01-GM101420-03 | High throughput microfluidic intracellular delivery platform | 93.859 | 389,305 |
| NIH | 5-R01-GM101988-37 | Sequence Determinants of Protein Structure and Stability | 93.859 | 513,637 |
| NIH | 5-R01-GM102311-03 | Cooperation and Cheating in the Evolution of Antibiotic Resistance in Bacteria | 93.859 | 283,395 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NIH | 5-R01-GM105984-03 | Investigating the generation of mechanical forces during tissue invagination | 93.859 | 275,593 |
| NIH | 5-R01-GM108348-03 | BIGDATA: Small: DA: DCM: Compressive genomics for large sequence datasets: Algorithms, applications, and software | 93.859 | 335,739 |
| NIH | 5-R01-GM110048-02 | Computationally guided design of helical peptide interaction reagents | 93.859 | 160,785 |
| NIH | 5-R01-GM110535-05 | Cysteine Arylation | 93.859 | 284,866 |
| NIH | 5-R01-HD0046943-10 | Mechanisms and Functions of FMRP in Neuronal Development | 93.865 | 169,252 |
| NIH | 5-R01-HD0057606-10 REVISED | Constraints on Phenological & Morphological Development | 93.865 | 171,508 |
| NIH | 5-R01-HD0067312-05 | Using Cognitive Neuroscience to Predict Dyslexia among Kindergarten Children | 93.865 | 486,560 |
| NIH | 5-R01-HG002439-13 | Regulation and Evolution of Alternative mRNA Isoform Expression in Mammals | 93.172 | 229,437 |
| NIH | 5-R01-HG004037-08 | Regulatory Motif Discovery in the Human Genome Using Comparative Genomics | 93.172 | 149,029 |
| 91 NIH | 5-R01-HG006781-03 | Development of technologies for genome-wide identification of RNA branch points | 93.172 | 134,417 |
| NIH | 5-R01-HL093225-05 | Cytoarchitecture of Central Respiratory Afferents Processing | 93.838 | 361,671 |
| NIH | 5-R01-HL107503-05 | Scalable Units for Building Vascularized Cardiac Graft | 93.837 | 496,230 |
| NIH | 5-R01-MH060379-14 | Ensemble activity in rat corticostriatal circuits during habit learning | 93.242 | 190,973 |
| NIH | 5-R01-MH065252-14 | Neural Basis of Categories | 93.242 | 348,475 |
| NIH | 5-R01-MH067105-10 | Performance Error Signals in Basal Ganglia-Forebrain Circuits of the Songbird | 93.242 | 325,949 |
| NIH | 5-R01-MH084966-05 | Opposing Effects of Chronic Stress on Amygdala and Hippocampus | 93.242 | 52,505 |
| NIH | 5-R01-MH085802-05 | Mechanisms and Therapeutics for Rett Syndrome | 93.242 | 170,024 |
| NIH | 5-R01-MH091115-05 | Chemical Genomic Approaches to Neurobiology of DISC1 | 93.242 | 507,071 |
| NIH | 5-R01-MH091174-05 | Capacity Limitations in the Cortex | 93.242 | 532,244 |
| NIH | 5-R01-MH091220-05 | The Role of GABAergic Synaptic Plasticity in Neural Circuit Functions | 93.242 | 357,970 |
| NIH | 5-R01-MH096914-04 | Impairments of Theory of Mind disrupt patterns of brain activity | 93.242 | 388,952 |
| NIH | 5-R01-MH097104-03 | Shank3 in Synaptic Function and Autism | 93.242 | 556,418 |
| NIH | 5-R01-MH103160-02 | Hypermagnetic engineered proteins for functional neuroimaging | 93.242 | 560,740 |
| NIH | 5-R01-MH104536-02 | Imaging Synaptic Transmission of Individual Active Zones | 93.242 | 367,638 |
| NIH | 5-R01-NS025529-26 | Extrapyramidal Systems | 93.853 | 315,086 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NIH | 5-R01-NS035145-15 | Integrative Functions of Prefrontal Cortex | 93.853 | 824 |
| NIH | 5-R01-NS040296-13 | Characterization of the Drosophila Synaptotagmin Family | 93.853 | 143,742 |
| NIH | 5-R01-NS051874-20 | The Cdk5/p35 Kinase | 93.853 | 421,853 |
| NIH | 5-R01-NS073127-05 REVISED | High-Throughput In Vivo Subcellular-Resolution Vertebrate Screening Platform | 93.310 | 449,110 |
| NIH | 5-R01-NS075421-04 | Genetically-Encoded Tools for Manipulation of Ion Channel and Receptor Functions | 93.853 | 325,221 |
| NIH | 5-R01-NS076462-05 | Noninvasive imaging-based electrophysiology using microelectronic devices | 93.310 | 312,067 |
| NIH | 5-R01-NS078127-02 | Neural mechanisms of timing in the oculomotor system | 93.853 | 552,179 |
| NIH | 5-R01-NS078839-04 | The Epigenetics of Alzheimer's Disease | 93.853 | 849,508 |
| NIH | 5-R01-OD011141-04 | Diagnosis and Pathobiology of Emerging Enterohepatic Helicobacter spp. in Mice | 93.351 | 427,337 |
| NIH | 5R03HD075076-02 | Development of tissue-specific knockout technologies for C. elegans | 93.865 | 75,150 |
| NIH | 5-R21-AI101807-02 | PGT Inhibitors Mapped From a Tunicamycin Blueprint | 93.855 | 137,120 |
| NIH | 5-R21-AI106025-02 | Highly Multiplexed Single-cell Transcript Analysis Using DNA-barcoded Nanowells | 93.310 | 201,240 |
| NIH | 5-R21-AI110787-02 | Multigenerational lineage heterogeneity and metabolic plasticity of CD8 T cells | 93.855 | 168,021 |
| NIH | 5-R21-CA159132-02 | Synergistic innate immune activation and cell killing by RIG-I ligands in HCV-HCC | 93.395 | 19,645 |
| NIH | 5-R21-CA177391-02 | Implantable device for high-throughput in vivo drug sensitivity testing | 93.394 | 263,169 |
| NIH | 5-R21-EB013764-02 | A 7-T/54-mm compact no-insulation HTS magnet for NMR applications | 93.286 | 51,767 |
| NIH | 5-R21-EB018529-02 | PEG-Branch-Nitroxide Nanostructured Organic MRI Contrast Agents | 93.286 | 123,678 |
| NIH | 5-R21-ES020466-02 | Phospho-Binding Ligands and Substrates of BRCA1 | 93.113 | 55,540 |
| NIH | 5-R21-ES022858-02 REVISED | Quantitative analysis of damage to the nucleotide pool | 93.113 | 153,260 |
| NIH | 5-R21-HL114011-02 | Directed Differentiation of Stem Cells to Cardiomyocytes Using Optically Actuated Micropost Arrays | 93.837 | 175,370 |
| NIH | 5-R21-MH092564-02 | Learned regulation of the limbic network via combined EEG and fMRI | 93.242 | 68,400 |
| NIH | 5-R21-MH097680-02 | Using Drosophila to Characterize the Molecular Pathogenesis of Autism | 93.242 | 129,915 |
| NIH | 5-R21-NS079992-02 | Cell Type-Specific Halorhodopsin Mice for Neuronal Silencing | 93.853 | -18,459 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NIH | 5-R21-NS084264-02 | Noninvasive Determination of Intracranial Pressure in Pediatric Patients | 93.853 | 170,992 |
| NIH | 5-R21-NS087225-02 | Validating a novel target for correction of pathophysiology in fragile X and TSC | 93.853 | 138,229 |
| NIH | 5-R21-NS088412-02 | SnapTag: Tagging active ensembles using a Strong Neuronal Activity Promoter | 93.853 | 242,652 |
| NIH | 5-R24-GM098650-03 | Legacy Informatics Resources for Glycomics | 93.859 | 244,151 |
| NIH | 5-R33-CA174550-03 | Microfluidic 3D Assays for Metastatic Cancer | 93.396 | 626,014 |
| NIH | 5-R37-CA080024-18 | Intra and Extra-Chromosomal Probes for Mutagenesis by Carcinogens | 93.393 | 255,204 |
| NIH | 5-R37-EB000244-35 | Controlled Release of Macromolecules | 93.286 | 272,936 |
| NIH | 5-R37-GM041934-24 REVISED | Cell Cycle and Sporulation in Bacillus Subtilis | 93.859 | 468,254 |
| NIH | 5R37GM057073-17 | Structure-Function Relationship of Glycosaminoglycans | 93.859 | 288,500 |
| NIH | 5-R37-HD028341-21 | Novel Second Messenger Signaling in the Striatum | 93.865 | 55,218 |
| NIH | 5-R37-MH087027-05 | Cortical Circuits for Attention and Decisions | 93.242 | 194,793 |
| NIH | 5-T32-EB001680-09 | Neuroimaging Training Program | 93.286 | 14,231 |
| NIH | 5-T32-EB001680-10 | Neuroimaging Training Program | 93.286 | 156,729 |
| NIH | 5-T32-ES007020-39 | Training Grant in Environmental Toxicology | 93.113 | 143 |
| NIH | 5-T32-ES007020-40 | Training Grant in Environmental Toxicology | 93.113 | 430,416 |
| NIH | 5-T32-GM007287-39 | Pre-Doctoral Grant in the Biological Sciences | 93.859 | -4,726 |
| NIH | 5-T32-GM007484-37 | Integrative Neuronal Systems-Year 3/7 | 93.859 | 19,838 |
| NIH | 5-T32-GM007484-38 REVISED | Integrative Neuronal Systems-Year 3/7 | 93.859 | 432,937 |
| NIH | 5-T32-GM087237-05 | Graduate Training in Computational and Systems Biology | 93.859 | 806 |
| NIH | 5-T32-HG004947-05 | MIT/Whitehead/Broad Computational Genetics Training Program | 93.172 | 12,852 |
| NIH | 5-T32-MH074249-07 | Training Program in the Neurobiology of Learning and Memory | 93.282 | 175,577 |
| NIH | 5-T32-MH082718-05 | Developmental Cognitive Neurosciences | 93.282 | -2,053 |
| NIH | 5-T32-OD010978-27 | Biomedical Research Training for Veterinary Scientists | 93.351 | 250,063 |
| NIH | 5-T32-OD010978-28 | Biomedical Research Training for Veterinary Scientists | 93.351 | 16,768 |
| NIH | 5-U01-CA084306-15 | Integrative genomic characterization of lung cancer metastasis in mouse and human | 93.396 | -26,471 |
| NIH | 5-U01-CA164337-01A1 | GI Tract Dysbiosis and Breast Cancer | 93.396 | -450,278 |
| NIH | 5-U01-CA164337-02 | GI Tract Dysbiosis and Breast Cancer | 93.396 | 148,083 |
| NIH | 5-U01-CA164337-03 | GI Tract Dysbiosis and Breast Cancer | 93.396 | 768,449 |
| NIH | 5-U01-HG007037-03 | Integrated Genome Discovery at Single Base Pair Resolution | 93.172 | 733,769 |
| NIH | 5-U01-HG007610-02 | Epigenomic variation atlas across human tissues and individuals in GTEx | 93.172 | 42,348 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|------------------|----------------------------|---|--------|-------------------|
| NIH | 5-U54-CA112967-10 | Tumor Cell Network Center: Administration (PARENT) | 93.397 | 1,525,540 |
| NIH | 5U54CA112967-10 REV | Tumor Cell Network Center: Administration (PARENT) | 93.397 | 125,000 |
| NIH | 5-U54-CA112967-10 REV | Tumor Cell Network Center: Administration (PARENT) | 93.397 | 67,721 |
| NIH | 5-U54-CA143874-05 | Administration | 93.397 | 460,523 |
| NIH | 5-U54-CA151884-04 | Administration | 93.397 | 458,402 |
| NIH | 5-U54-CA151884-05 | Administration | 93.397 | 1,423,147 |
| NIH | 5-U54-CA163109-03 | Impact of Cellular and Extracellular Host Components on Tumor Progression | 93.397 | 90,630 |
| NIH | 5-U54-CA163109-04 | Impact of Cellular and Extracellular Host Components on Tumor Progression | 93.397 | 512,770 |
| NIH | 5-UJH2-TR000496-02 | All-Human Microphysical Model of Metastasis Therapy | 93.350 | 155,029 |
| NIH | 6-R01-HG004037-07S1 | Regulatory Motif Discovery in the Human Genome Using Comparative Genomics | 93.172 | 650,824 |
| NIH | 7-R01-CA160860-03 | Developing Direct Small-Molecule Probes of Myc-Dependent Transcription | 93.393 | 102,015 |
| NIH | 7-R01-EY023322-03 | Neural mechanisms of color | 93.867 | 104,576 |
| NIH | 7-R01-GM066976-11 | Structures and lipid interactions of curvature-inducing membrane peptides by NMR | 93.859 | 121,477 |
| NIH | 7-R01-GM088204-05 | Solid-state NMR of the influenza M2 protein in lipid bilayers | 93.859 | 163,495 |
| NIH | 7-R01-HD057606-09 | Constraints on Phonological & Morphological Development | 93.865 | 179,962 |
| NIH | 7-R21-OD011193-03 | Targeted genome modification of guinea pig and sheep using engineered nucleases | 93.351 | 44,330 |
| NIH | 8-DP1-ES022576-05 | Developing novel methods to measure DNA repair capacity in human populations | 93.113 | 500,869 |
| NIH | 8-DP1-GM105381-05 | NIH Director's Pioneer Award | 93.310 | 371,633 |
| NIH | 8-DP1-NS082101-02 | Generating Transplatable Neurons by in Vivo Combinatorial Screening of Transcription Regulator RNAs | 93.310 | 85,434 |
| NIH | 8-DP1-NS082101-04 | Generating Transplatable Neurons by in Vivo Combinatorial Screening of Transcription Regulator RNAs | 93.310 | 813,484 |
| NIH | 9-P41-EB015871-26A1 | MIT Laser Biomedical Research Center (P41-RR02594) | 93.286 | 444,695 |
| NIH | K99MH099654-02 | Cortical mechanisms of learned spatial-temporal sequence coding | 93.242 | 51,718 |
| NIH | T32-6M-008334-25 | Interdepartmental Biotechnology Training Program | 93.859 | 11,978 |
| Other HHS | | Total for NIH | | 99,038,995 |
| HHS | 1-U01-FD005291-01 | Integrated approach to determine equivalence in complex drug mixtures | 93.103 | 123,948 |

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|--|----------------------------|---|--------|--------------------|
| HHS | HH5P233201200367P | CISR Multi-Sponsored Consortium | 93.000 | 28,095 |
| HHS | HHSF223201310210C | A Systematic Approach to Addressing Intentional Adulteration of FDA-regulated Food and Drug Products and Ingredients Emanating from the Global Supply Chain | 93.103 | 987,546 |
| Total for Other HHS | | | | 1,139,588 |
| TOTAL for Department of Health & Human Services | | | | 100,178,583 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|--|----------------------------|--|--------|------------------|
| MISCELLANEOUS FEDERAL GOVT | | | | |
| Department of Agriculture | | | | |
| USDA | 58-8042-5-005 | Investigating Bacterial Adhesion and Detachment on Plant Surfaces Under Flow Conditions | 10.001 | 52,928 |
| Total for Department of Agriculture | | | | 52,928 |
| Department of Commerce | | | | |
| DOC | 70NANB14H213 | Neutron focusing mirrors for the imaging facility at NIST | 11.609 | 69,038 |
| DOC | NA 17RG2614 | Dynamics of Recolonization in a Depleted Species: A Study of the Gray Seal (<i>Halichoerus Grypus</i>) | 11.417 | 0 |
| DOC | NA10OAR4170086 | Parent Account: Sea Grant College Program | 11.417 | 580,921 |
| DOC | NA10OAR4310135 | Sensitivity Patterns of Atlantic Meridional Overturning and related Climate Diagnostics Over the Instrumental Period | 11.431 | 7,655 |
| DOC | NA11OAR4310092 | Collaborative Research: Tropical Cyclone Tracks in Present and Future Climates | 11.431 | 16,763 |
| 88 DOC | NA11OAR4310159 | Resolving the Role of Contact Ice Nucleation on the Earth's Climate System Using Laboratory and Field Studies | 11.431 | 38,432 |
| DOC | NA12OAR4310064 | Sources and Impacts of Ammonia on PM loading during CalNex | 11.431 | 82,892 |
| DOC | NA13OAR4310135 | Identifying Mechanisms of AMOC variability in ECCO State Estimates and CMIP5 Models | 11.427 | 33,298 |
| DOC | NA13OAR4310072 | Organic Nitrogen in Atmospheric Aerosols: Concentrations, Chemical Composition, and Properties | 11.417 | 125,555 |
| DOC | NA13OAR4310084 | Assessing the Terrestrial and Atmospheric Nitrogen Cycle | 11.431 | 44,588 |
| DOC | NA14OAR4170077 | 2014 Parent Account: Sea Grant College Program | 11.417 | 725,899 |
| DOC | NA14OAR4310132 | Deposition of Atmospheric Organic Carbon: New Constraints on the Reactive Carbon Budget | 11.431 | 91,204 |
| Total for Department of Commerce | | | | 1,816,245 |
| Department of Education | | | | |
| ED | ED-OSE-10-C-0067 | Web Accessibility Initiative (WAI) Core | 84.CCC | 446,854 |
| Total for Department of Education | | | | 446,854 |
| Department of Interior | | | | |
| DOI | G14AP00027 | Kinematics of Faulting in the Northern San Francisco Bay Region from GPS measurements: Collaborative Research with the Massachusetts Institute of Technology and University of California, Riverside | 15.807 | 24,584 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|-------------------------------------|----------------------------|--|--------|---------------|
| Department of Transportation | | | | 24,584 |
| DOT | 09-C-NE-MIT | Air Transportation Center of Excellence for Aircraft Noise and Emissions Mitigation (Phase III) | 20.109 | 410,106 |
| DOT | 11-G-016 | FAA Joint University Program for Air Transportation Proposal for Activities by the Massachusetts Institute of Technology | 20.108 | 50,841 |
| DOT | 13-C-AJFE-002 | Center of Excellence for Alternative Jet Fuels and Environment | 20.109 | 58,025 |
| DOT | 13-C-AJFE-003 | Center of Excellence for Alternative Jet Fuels and Environment | 20.109 | 309,388 |
| DOT | 13-C-AJFE-004 | Center of Excellence for Alternative Jet Fuels and Environment | 20.109 | 129,523 |
| DOT | 13-C-AJFE-005 | Center of Excellence for Alternative Jet Fuels and Environment | 20.109 | 70,819 |
| DOT | 13-C-AJFE-007 | Center of Excellence for Alternative Jet Fuels and Environment | 20.109 | 115,524 |
| DOT | 13-C-AJFE-008 | Center of Excellence for Alternative Jet Fuels and Environment | 20.109 | 3,404 |
| DOT | 13-C-AJFE-010 | Center of Excellence for Alternative Jet Fuels and Environment | 20.109 | 39,151 |
| DOT | 13-C-AJFE-011 | Center of Excellence for Alternative Jet Fuels and Environment | 20.109 | 69,162 |
| DOT | 13-C-AJFE-MIT-01 | Center of Excellence for Alternative Jet Fuels and Environment | 20.109 | 4,110 |
| DOT | 14-G-014 | An Integrated Approach to Safety and Security in Aircraft Network Systems | 20.108 | 71,880 |
| DOT | DTRF53-11-C-00016 | Development and Evaluation of a High Speed Rail Scheduling and HUD Display | 20.CCC | 0 |
| DOT | DTRT07-G-0001 | Parent Account - DTRT07-G-0001 - University Transportation Centers Program | 20.701 | -432 |
| DOT | DTRT12-G-UTC01 | UTC Research Center (Parent) | 20.701 | 2,390,712 |
| DOT | DTRT13-G-UTC31 | Region 1 University Transportation Center | 20.701 | 487,324 |
| DOT | DTRT57-07-C-10002 | Library Services for DOT | 20.CCC | 903 |
| DOT | DTRT57-12-C-10029 | Library Services for DOT | 20.CCC | 62,295 |
| DOT | DTRT5714P80013 | Assessment and Analysis of Carbon Dioxide Emissions Metrics | 20.CCC | 4,638 |
| DOT | DTRT5714P80095 | Modeling to Support the Cost Benefit Analysis of an Aircraft CO2 Standard | 20.CCC | 81,451 |
| DOT | DTRT-RVT-91-1073 | Advanced Solutions to Capture Mobility Data (ASCMD) | 20.CCC | 118,248 |

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|---|----------------------------|--|--------|-------------------|
| Other Agencies | | | | |
| Misc. | 2011-JJ-CX-K016 | Divert and Alert: Mitigating and Warning of Traffic Threats to Police Stopped Along the Roadside | 16.560 | 247,947 |
| Misc. | 2014-DN-077-ARI080-02 | ARI-LA: Rapid, Low-Dose Detection of Shielded Special Nuclear Material | 97.077 | 127,439 |
| Misc. | 523C48185VA241-13-D-0053 | VA IDIQ FY'13: Task Order | 64.CCC | 38,427 |
| Misc. | 523C48267VA241-13-D-0053 | VA IDIQ FY'13: Task Order | 64.CCC | 126,997 |
| Misc. | 83503301 | Investigating the effects of atmospheric aging on the radiative properties and climate impacts of black carbon aerosol | 66.509 | 186,894 |
| Misc. | 83522801 | Using advanced statistical techniques to identify the drivers and occurrence of historical and future extreme air quality events in the United States from observations and models | 66.509 | 253,431 |
| Misc. | AID-OAA-A-12-00095 | CITE and IDIN | 98.001 | 2,073,970 |
| Misc. | HJ-50085-12 | ELVIS: Electronic Locator of Vertical Interval Successions | 45.169 | -1,507 |
| Misc. | HK-50072-13 | Annotation Studio: Multimedia Annotation for Students | 45.169 | 204,594 |
| Misc. | NRO000-13C0309 | Electrical, thermal and environmental reliability of GaN HEMTs for V- and W-band Space Applications | 12.CCC | 124,973 |
| Misc. | PW-51624-14 | Preparing to Preserve, Digitize, and Catalog the Southeast Chicago Historical Museum Collection | 45.169 | 33,458 |
| Misc. | RD-8350331-0 | Investigating the effects of atmospheric aging on the radiative properties and climate impacts of black carbon aerosol | 66.509 | 94,802 |
| Misc. | VA118-12-C-0040 | Quasi-Passive Prosthetic Socket Technology with Optimal Shape and Dynamic Properties | 64.CCC | 295,984 |
| Misc. | VA254-MU-0633 | Evaluation of Robot-Assisted Neuro-Rehabilitation | 64.CCC | 656 |
| Misc. | XA-83505101-0 | Transportation - Related Policies and Economy - Wide Impacts | 66.034 | 122,654 |
| Misc. | XA-83600001-1 | Integrated Assessment of Greenhouse Gases | 66.034 | 498,610 |
| Total for Other Agencies | | | | 4,429,329 |
| TOTAL for Miscellaneous Federal Govt | | | | 11,247,012 |

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|--|----------------------------|--|--------|-------------|
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | | | | |
| NASA | NNA06CN23A | Cognitively Based Traffic complexity Metrics for Future NGATS Concepts of Operations | 43.CCC | 22,242 |
| NASA | NNA09DB36A | The Moon as Cornerstone to the Terrestrial Planets: the Formative Years | 43.CCC | 383,526 |
| NASA | NNA13AA90A | Foundations of Complex Life: Evolution, Preservation & Detection on Earth & Beyond | 43.001 | 1,376,696 |
| NASA | NNG10HP00C | Continued Development and Operation of the NASA Mark IV and Next Generation Very Long Baseline Interferometry (VLBI) Systems | 43.CCC | 1,396,105 |
| NASA | NNG12FD70C | Regolith X-ray Imaging Spectrometer (REXIS) - Phase B | 43.CCC | 1,250,270 |
| NASA | NNG14FC03C | Transiting Exoplanet Survey Satellite | 43.CCC | 10,052,127 |
| NASA | NNG14PJ13C | Neutron Star Composition Explorer (NICER) Project Detector Subsystem | 43.CCC | 2,142,091 |
| 88 NASA | NNG15HZ35C | NASA Mark IV/VLBI Follow-On | 43.CCC | 1,184,541 |
| NASA | NNH11CC25C | Visual Estimation and Relative Tracking for Inspection of Generic Objects (VERTIGO) | 43.CCC | 39 |
| NASA | NNH13CJ23C | InSPIRE 2 | 43.CCC | 269,580 |
| NASA | NNL10AA13C | Assuring Safety using System Theoretic Concepts | 43.CCC | 32,602 |
| NASA | NNL13AA12C | Scalable ion Electro Spray Propulsion System (S-IEPS) | 43.CCC | 764,597 |
| NASA | NNM08AA18C | GRAIL | 43.CCC | 1,817,721 |
| NASA | NNM13AA03G | A New Modeling Approach for Rotating Cavitation Instabilities in Rocket Engine Turbopumps | 43.007 | 249,840 |
| NASA | NNX08AX15G | A Search for Extra-Terrestrial Genomes (SETG): An In-situ Detector for Life on Mars Ancestrally Related to Life on Earth | 43.CCC | 4,035 |
| NASA | NNX09AE58G | Continuing MIT Participation in the Monitoring and Interpretation of Data from the Suzaku XIS | 43.CCC | 38,745 |
| NASA | NNX09AM53G | Lunar and Planetary Gravity and Topography | 43.003 | 99,579 |
| NASA | NNX10AB27G | Exploring the Outer Solar System with Stellar Occultations | 43.CCC | 158,033 |
| NASA | NNX10AD41G | Atomic Data Unleashed: Interactive, Scriptable Interfaces to Databases and Codes for X-RAY Spectroscopic Analysis and Modeling | 43.CCC | 124,855 |
| NASA | NNX10AE25G | Supernova remnant and galaxy cluster observations with the Micro-X high resolution microcalorimeter X-ray imaging rocket. | 43.CCC | 7,929 |
| NASA | NNX10AE50G | High Performance Three-Dimensionally Integrated Active Pixel X-Ray Sensors | 43.CCC | 6,450 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NASA | NNX10AE68G | Astro-comb Visible Wavelength Calibrator as Supporting Technology for Exoplanet Research | 43.CCC | 7,992 |
| NASA | NNX10AG27G | SMASS-Next: Next Generation Neo Spectroscopic Survey | 43.CCC | 17,732 |
| NASA | NNX10AN92A | Methodologies to Evaluate Trade-offs Between Environmental Impacts and Air Transportation System Performance | 43.CCC | 112,430 |
| NASA | NNX10AR85G | Laboratory Photochemistry Experiments to Identify the Source Reaction | 43.CCC | 1,876 |
| NASA | NNX11AB35A | Aircraft and Technology Concepts for an N+3 Subsonic Transport | 43.CCC | 600,484 |
| NASA | NNX11AF17G | Advanced Global Atmospheric Gases Experiment (AGAGE) Collaborative Research Project | 43.001 | 1,178,307 |
| NASA | NNX11AF30G | Development of a critical-angle transmission grating spectrometer | 43.001 | 41,038 |
| NASA | NNX11AG85G | Exoplanetary Spin-Orbit Angles | 43.001 | 129,266 |
| NASA | NNX11AI02G | A Major Addition to the Number of Sources in the RXTE/ASM Light Curve Data Base | 43.001 | -11 |
| NASA | NNX11AI66A | Geometry Interface for the NASA OpenMDAO Framework | 43.002 | 157,425 |
| NASA | NNX11AJ28G | Development of a Magnetometer for a Planetary Lander | 43.001 | 188,983 |
| NASA | NNX11AK30G | Lunar Laser Altimetry and Comparative Planetology | 43.001 | 165,855 |
| NASA | NNX11AL79G | Quantifying rates of heat and carbon uptake in ocean models and its implication for climate change | 43.001 | 210,357 |
| NASA | NNX11AN37G | Laboratory studies of the effects of impurities on the flow of icy materials on mars | 43.001 | 10,933 |
| NASA | NNX11AN72G | A modeling analysis of the impact of anthropogenic aerosols on actinic fluxes and photolysis rates constrained by aircraft and satellite data | 43.001 | 67,163 |
| NASA | NNX11AO19G | THE GBM ALL-SKY X-RAY BURST MONITOR (FERMI 41270) | 43.001 | 41,599 |
| NASA | NNX11AQ12G | Estimating the Circulation and Climate of the Ocean, Phase III (ECCO3): Improved Representation of Ocean-Ice Interactions in Earth System Models | 43.001 | 305,688 |
| NASA | NNX11AQ21A | MIT Participation in the Station Experiment for X-ray Timing and Navigation Technology (SEXTANT; formerly NICER) PARENT | 43.007 | 5,484 |
| NASA | NNX12AB20A | Realtime Assessment of Emissions Impacts of Airports | 43.CCC | 154,715 |
| NASA | NNX12AC09G | Spacesuit Trauma Countermeasure System for Intravehicular and Extravehicular Activities | 43.CCC | 99,571 |
| NASA | NNX12AC25G | Organics on Titan's Surface | 43.001 | 92,402 |
| NASA | NNX12AC76G | Obliquities of Kepler stars: clues to planet migration | 43.001 | 34,080 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NASA | NNX12AE14G | Lense-Thirring precession in neutron-star low-mass X-ray binaries | 43.001 | 22,488 |
| NASA | NNX12AE37G | Leveraging High Resolution Spectra to Understand the Disk and Relativistic Iron Line of Cygnus X-1 | 43.001 | 11,322 |
| NASA | NNX12AE83G | THE SEYFERT 1 H0557-385: A LONG TRANSITION FROM UNOBSERVED TO OBSERVED TYPE 1 AGN? (SWIFT 7100017) | 43.001 | 4,181 |
| NASA | NNX12AF21G | Development of Fabrication Process for Critical-Angle X-ray Transmission Gratings | 43.001 | 505,532 |
| NASA | NNX12AF22G | Directly-Deposited Blocking Filters for Imaging X-ray Detectors: Technology Development for the International X-ray Observatory | 43.001 | 16,902 |
| NASA | NNX12AG58G | Heterogeneous chemistry of organic haze in planetary atmospheres: Laboratory studies of the kinetics and products of radical + particle reactions | 43.001 | 79,215 |
| NASA | NNX12AH12G | Laboratory Verification of Instrumentation for Soft X-ray Polarimetry | 43.001 | 100,743 |
| NASA | NNX12AH80G | Phase Equilibrium Investigation of Planetary Materials | 43.001 | 105,548 |
| NASA | NNX12AJ75A | Higher-order Space-time Adaptive Methods for Complex Turbulent Flows | 43.002 | 206,536 |
| NASA | NNX12AJ93G | Gravity data for ocean circulation and climate studies | 43.001 | 256,692 |
| NASA | NNX12AL26G | Identifying Disrupted Differentiated Bodies in the Main Asteroid Belt | 43.001 | 19,853 |
| NASA | NNX12AM16G | NRI-Small: A Novel Powered Leg Prosthesis Simulator for Sensing and Control Development | 43.009 | 506,902 |
| NASA | NNX12AO26G | Solid-Earth Lead for DESDynI-R Science Definition Team | 43.001 | 102,112 |
| NASA | NNX12AQ59G | High Temperature Superconductors as Electrodynamical Deployment and Support Structures in Spacecraft | 43.001 | 105,117 |
| NASA | NNX13AC34G | Interpreting Ecological Variability Using Remotely Observed Optical Properties and Ocean Models | 43.001 | 297,382 |
| NASA | NNX13AD02G | Supernova Remnant Observations with Micro-X | 43.001 | 257,989 |
| NASA | NNX13AE77G | MIT Participation in Calibration and Ground Software Development for Astro-H | 43.CCC | 139,488 |
| NASA | NNX13AF80G | Communication of solar variability to the Earth's surface via the stratosphere | 43.001 | 143,898 |
| NASA | NNX13AH91A | Research on the Natural Variability of Climate and the Impact on Anthropogenic Forcing on Climate | 43.001 | 250,381 |
| NASA | NNX13AI40G | Ensemble Downscaling of Soil Moisture: Merging Remotely Sensed Precipitation and High Resolution Land Surface Information | 43.001 | 151,872 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NASA | NNX13AI62G | Characterization of the Stratospheric, Lower Thermospheric, and Ionospheric Variability Related to the Sudden Stratospheric Warmings | 43.001 | 78,088 |
| NASA | NNX13AJ72G | CONSTRAINING THE EPISODIC LOW-LEVEL ACCRETION IN THE QUIESCENT NEUTRON STAR TRANSIENT XTE J1701-462 (SWIFT 8110124) | 43.001 | 2,688 |
| NASA | NNX13AJ86G | Mars Reconnaissance Orbiter (MRO) Gravity Field Analysis | 43.001 | 133,428 |
| NASA | NNX13AK16G | Geometry and Meshing Control for Design through Analysis | 43.001 | 61,797 |
| NASA | NNX13AK88G | Linking Greenland ice sheet mass loss to decadal circulation changes in the ocean | 43.001 | 428,025 |
| NASA | NNX13AK98G | Rheological behavior of icy mixtures with application to the outer planets | 43.001 | 138,954 |
| NASA | NNX13AO15G | Assessment of the Impact of Aerosol Composition of Cirrus Clouds Using Data from the MACPEX Field Study | 43.001 | 102,054 |
| NASA | NNX13AP37G | The Wind SWE/Faraday Cup: Mission Operation and Data Analysis | 43.001 | 50,185 |
| NASA | NNX13AQ67G | Extended Range Laser Altimeter (ERLA) | 43.001 | 53,979 |
| NASA | NNX14AB40G | Tidal Evolution of Coalescing Compact Binaries, Short Period Exoplanets, and Rotating Stars | 43.001 | 167,518 |
| NASA | NNX14AC71A | System Safety for Highly Distributed Air Traffic Management | 43.002 | 642,360 |
| NASA | NNX14AC75G | Microwave Radiometer Technology Acceleration (MiRaTA) CubeSat | 43.001 | 513,417 |
| NASA | NNX14AD97G | Comprehensive Systems Architecting of Exploration of Infrastructures | 43.007 | 105,781 |
| NASA | NNX14AE67G | The Final Stages of Outbursts in Soft X-ray Transients | 43.001 | 21,620 |
| NASA | NNX14AE76G | Research Opportunities in Space and Earth Science-2012 (ROSES 2012) | 43.001 | 538,121 |
| NASA | NNX14AG47A | Active Wing Shaping Control Concept Using Composite Lattice-based Cellular Materials | 43.001 | 79,986 |
| NASA | NNX14AH11A | Ubiquitous 2-Dimensional Smart Sensing (UDS2) Initiative | 43.001 | 127,429 |
| NASA | NNX14AH75A | Modular Rapidly Manufactured Spacecraft | 43.001 | 198,373 |
| NASA | NNX14AI58A | Field Investigations to Enable Solar System Science and Exploration | 43.003 | 4,075 |
| NASA | NNX14AJ16G | Development of Solid-State Local-oscillator Sources for Terahertz Frequencies | 43.001 | 111,029 |
| NASA | NNX14AJ51G | Data and forcing integration for improved estimation of spatial sea level patterns and their uncertainties, with extended diagnostics for closed budget analysis | 43.001 | 208,762 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|--|----------------------------|--|--------|-------------------|
| NASA | NNX14AK27G | PPhotochemistry and Spectroscopy of Sulfur Dioxide, Sulfur Monoxide and Elemental Sulfur as Source Reactions for Archean Sulfur Mass-Independent Isotope Fractionation | 43.001 | 65,081 |
| NASA | NNX14AL95G | Data Retrieval and Analysis from Nanosatellite Microwave Radiometers | 43.001 | 89,181 |
| NASA | NNX14AP38G | How sensitive are global climate forcing and surface air quality estimates to aerosol properties? | 43.001 | 60,258 |
| NASA | NNX14AQ03G | Geodetic Analysis Enhancements for Real-Time and Millimeter Accuracy Reference Frames | 43.001 | 92,871 |
| NASA | NNX14AT22A | Global Environmental Impact of Supersonic Cruise Aircraft in the Stratosphere | 43.004 | 269,365 |
| NASA | NNX15AC43G | NRA Research Opportunities in Space and Earth Sciences-2013 (ROSES-2013): Advanced Packaging for Critical Angle X-ray Transmission Gratings | 43.001 | 353,986 |
| NASA | NNX15AF85G | The Search for Extra-Terrestrial Genomes (SETG) | 43.001 | 68,633 |
| NASA | NNX15AH72G | Experimental and Theoretical Investigations of Solar Nebula Magnetic Fields | 43.001 | 23,729 |
| Total for National Aeronautics and Space Administration | | | | 33,079,896 |
| TOTAL for National Aeronautics and Space Administration | | | | 33,079,896 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|------------------------------------|----------------------------|--|--------|-------------|
| NATIONAL SCIENCE FOUNDATION | | | | |
| NSF | 1404540 | Generic flows, Ricci curvature; Heegaard splittings and nodal sets | 47.049 | 4,443 |
| NSF | 1502244 | Tensor categories and representation theory | 47.049 | 4,406 |
| NSF | 1505733 | Development of THz laser frequency combs | 47.041 | 14,103 |
| NSF | 1508096 | Equivariance and higher algebra in motivic homotopy theory | 47.049 | 2,789 |
| NSF | 1510305 | Flexibility in symplectic and contact geometry | 47.049 | 20,442 |
| NSF | ACI-1313789 | EAGER: Demonstrating Decentralized Social Software using Linked Data (Crosscloud) | 47.070 | 102,775 |
| NSF | ACI-1322254 | VOSS: Collaborative Research: Is Larger Smarter? Investigating the Effect of Group Size on Collective Intelligence | 47.070 | 214,962 |
| NSF | ACI-1442997 | CIF21 DIBBs: An Infrastructure for Computer-Aided Discovery in Geoscience | 47.070 | 119,736 |
| NSF | AGS 1461347 | International Workshop on Comparing Ice Nucleation Measuring Systems 2014 (ICIS 2014) #3 | 47.050 | 27,616 |
| NSF | AGS-0940685 | Collaborative Research: Intermittent Turbulence Study of Space Plasmas Using ROMA and DSRG | 47.050 | 16,280 |
| NSF | AGS-0944121 | Tropospheric Anthropogenic Aerosols and Climate | 47.050 | -112 |
| NSF | AGS-1005480 | Collaborative Research: Dispersion of particles within and above plant canopies | 47.050 | 73,188 |
| NSF | AGS-1025467 | Transition of the CEDAR Database to Madrigal | 47.050 | 39,345 |
| NSF | AGS-1032244 | Collaborative Research: Convective Organization and Climate | 47.050 | 47,115 |
| NSF | AGS-1042569 | Climate Change in the Upper Atmosphere | 47.050 | 62,125 |
| NSF | AGS-1053648 | CAREER: Understanding Chemistry, Transport and Fate of Mercury and Persistent Organic Pollutants through Global Atmospheric Modeling | 47.050 | 120,951 |
| NSF | AGS-1056225 | CAREER: Photochemical aging of atmospheric organic aerosol: Chamber studies of the chemical evolution of oxidized organic species | 47.050 | 176,571 |
| NSF | AGS-1132267 | Ionospheric Disturbances Related to the Stratospheric Sudden Warnings | 47.050 | 39,059 |
| NSF | AGS-1136480 | Collaborative Research: The Effect of Near-Equatorial Islands on Climate | 47.050 | 87,191 |
| NSF | AGS-1148594 | Improved Understanding of Moist Atmospheric circulations Through an Effective Static Stability Framework | 47.050 | 100,045 |
| NSF | AGS-1202078 | Theory of Trace Gas Distributions in the Lower Stratosphere and Near the Tropopause | 47.050 | 74,773 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | AGS-1238109 | Impacts of the Biosphere on Global Tropospheric Chemistry and Climate | 47.050 | 52,728 |
| NSF | AGS-1242204 | The Millstone Hill Geospace Facility | 47.050 | 1,989,989 |
| NSF | AGS-1243058 | Collaborative Research: CEDAR -- Large-scale Characterization of the Sub-Auroral Polarization Stream and its Impact on the Ionosphere-Thermosphere System | 47.050 | 39,081 |
| NSF | AGS-1245011 | Collaborative Research: Flow Reactor Simulations of the Evolution of Atmospheric Organic Aerosol | 47.050 | 23,096 |
| NSF | AGS-1318307 | RAPID: Measurement of Low-Volatility Gas-Phase Organic Compounds during the Southern Oxidant and Aerosol Study (SOAS) | 47.050 | 0 |
| NSF | AGS-1339264 | Tropospheric Anthropogenic Aerosols and Climate | 47.050 | 222,476 |
| NSF | AGS-1342810 | Trends and Variability of Temperatures near the Tropical Tropopause Layer and Implications for Tropical Cyclones | 47.050 | 125,063 |
| NSF | AGS-1343045 | Collaborative Research: CEDAR--Study of Storm-time Large Scale Structures in the Subauroral Ionosphere with Coupled First-principles Model and Multi-instrument Observations | 47.050 | 25,811 |
| NSF | AGS-1343056 | Collaborative Research: CEDAR -- Understanding the High-to-Mid Latitude Ionospheric Response to Stratospheric Warnings | 47.050 | 61,996 |
| NSF | AGS-1343967 | INSPIRE Track 1: Mahali: Space Weather Monitoring Everywhere | 47.050 | 209,271 |
| NSF | AGS-1418508 | Collaborative Research: Self-Aggregation of Moist Convection, Radiative-Convective Instability, and the Regulation of Tropical Climate | 47.050 | 1,450 |
| NSF | AGS-1419667 | Linkages of Changes in Ozone to Arctic Climate Change in the Stratosphere and Troposphere | 47.050 | 113,704 |
| NSF | AGS-1461305 | International Workshop on Comparing Ice Nucleation Measuring Systems 2014 (ICIS 2014) | 47.050 | 49,922 |
| NSF | AGS-1461347 | International Workshop on Comparing Ice Nucleation Measuring Systems 2014 (ICIS 2014) #3 | 47.050 | 55,087 |
| NSF | ANT-1103375 | Postdoctoral Research Fellowship - D. Goldberg | 47.078 | 5,936 |
| NSF | ANT-1141923 | Investigation of the Relationship between Storm Enhanced Density and Scintillation in Antarctica | 47.078 | 83,621 |
| NSF | ARC-1203526 | Collaborative Research: Evaluating the Competing Impacts of Global Emissions Reductions and Climate Change on the Distribution and Retention of selected POPs in the Arctic Ocean | 47.078 | 115,772 |
| NSF | AST-0747154 | CAREER: Building Rocky Planets: From Mercury and Vesta to GL 581C | 47.049 | -1,690 |
| NSF | AST-0907766 | SMASS- Next: Next Generation Asteroid Spectroscopic Survey | 47.049 | 141,819 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | AST-1105835 | MITEoR: a HERA pathfinder instrument for cheaper 21 cm precision cosmology | 47.049 | 82,496 |
| NSF | AST-1108595 | Spin-Orbit Alignment in Binary Stars | 47.049 | 847 |
| NSF | AST-1109115 | Feedback from the First Stars: Chemical Abundances in the First Billion Years after the Big Bang | 47.049 | 70,868 |
| NSF | AST-1156504 | REU Site: Astronomy and Atmospheric Science at MIT Haystack Observatory | 47.049 | 168,377 |
| NSF | AST-1255160 | CAREER: The origin of the metal-poor halo of the Milky Way | 47.049 | 150,152 |
| NSF | AST-1310930 | The HI 21-cm Line as a Probe of Stellar Mass Loss and Evolution | 47.049 | 68,811 |
| NSF | AST-1343336 | Realtime GHz-Wide Spectrum Sensing and Acquisition Using the Sparse FFT | 47.049 | 306,240 |
| NSF | AST-1411622 | Collaborative Research: Observing the Epoch of Reionization with the Murchison Widefield Array | 47.049 | 70,148 |
| NSF | BCS-0955818 | CAREER: Typical and atypical development of brain regions for Theory of Mind | 47.075 | 96,798 |
| NSF | BCS-1023596 | Collaborative Research: Integrating shape, scaling, and alignment in a global approach to F0 events in Intonation Systems | 47.075 | 10,067 |
| NSF | BCS-1134780 | Automatic Detection of Cortical Networks Across Frequencies in Audiovisual Speech Integration | 47.075 | 43,558 |
| NSF | BCS-1226731 | Collaborative Research: Grounding the Behavioral Immune System in Mental and Physiological Processes | 47.075 | 133 |
| NSF | BCS-1227892 | Doctoral Dissertation Research: Causal Representations in Children's Transitive Sentences - GF Kline | 47.075 | 1,994 |
| NSF | BCS-1251717 | Doctoral Dissertation Research: Experimental Investigations of Multiple Wh-Questions | 47.075 | 842 |
| NSF | BCS-1258640 | MOOCs and the Ethnography of Media Socialization | 47.075 | 76,847 |
| NSF | BCS-1420785 | Doctoral Dissertation: Investigating the role of grammatical representation in language learnability - GF L. Bergen | 47.075 | 9,654 |
| NSF | BCS-1429216 | Lookit: Online interface for large-scale developmental studies | 47.075 | 70,648 |
| NSF | BCS-1440427 | Doctoral Dissertation Research: Case Marking and the Left Periphery in Dinka | 47.075 | 1,200 |
| NSF | BCS-1445131 | EAGER: Detection Of In Vivo Corticosterone In Mice Using Cophmore Engineering And Fluorescent Carbon Nanotube Sensors | 47.075 | 21,533 |
| NSF | BCS-1451173 | Doctoral Dissertation Research: Investigating cognitive and communicative pressures on natural language lexicons | 47.075 | 5,688 |
| NSF | BCS-1454094 | Career: Understanding Real-World Auditory Scene Analysis | 47.075 | 11,150 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | CBET-0845347 | CAREER: Technologies for Genome-Wide In Vivo Study of Neuronal (Axonal) Degeneration | 47.041 | 26,748 |
| NSF | CBET-0939511 | NSF Science and Technology Center: Emergent Behaviors of Integrated Cellular Systems | 47.041 | 4,569,981 |
| NSF | CBET-0952493 | CAREER: CELL SEPARATION BY ROLLING ON ASYMMETRIC RECEPTOR PATTERNS | 47.041 | -3,710 |
| NSF | CBET-0952564 | CAREER: Fundamental Studies of Condensation Phenomena on Heterogeneous and Hierarchical Nanoengineered Surfaces | 47.041 | 7,195 |
| NSF | CBET-0954986 | CAREER: Design, Construction and Characterization of Metabolite Valves | 47.041 | 90,320 |
| NSF | CBET-0966452 | Bouncing droplets: from fundamentals to digital microfluidics | 47.041 | -377 |
| NSF | CBET-1033533 | Directed Assembly of Nanoscale Process Systems | 47.041 | 26,519 |
| NSF | CBET-1053233 | CAREER: A Neurophotonic Platform for Causal Brain Analysis | 47.041 | 127,831 |
| NSF | CBET-1133813 | Fundamental Studies of Graphene Solutions: Exfoliation, Dispersion, and Stability | 47.041 | 47,662 |
| NSF | CBET-1150615 | CAREER: Dielectric Phenotyping of Bacteria for Energy and Medicine | 47.041 | 96,735 |
| NSF | CBET-1159695 | Collaborative Research: Using a Fully Autonomous Brain-Body Interface to Study the Cortical Dynamics of Learning | 47.041 | 25,199 |
| NSF | CBET-1253228 | CAREER: Predicting granular flows: Amorphous continuum modeling with a length-scale | 47.041 | 68,582 |
| NSF | CBET-1253890 | CAREER: Optoelectronic neural scaffolds: materials platform for investigation and control of neuronal activity and development | 47.041 | 119,642 |
| NSF | CBET-1258626 | Collaborative Research: NSF/DOE Partnership on Advanced Combustion Engines: Advancing Low Temperature Combustion and Lean Burning Engines for Light- and Heavy-Duty Vehicles with Microwave Assisted Sp | 47.041 | 179,212 |
| NSF | CBET-1335938 | Dynamics of self-entangled DNA molecules | 47.041 | 51,741 |
| NSF | CBET-1344219 | INSPIRE Track 1: Nanotechnology for Adaptive Optics | 47.041 | 478,196 |
| NSF | CBET-1454299 | CAREER: Molecular Catalysis for Waste Valorization | 47.041 | 31,490 |
| NSF | CBET-1505644 | 2014 AES Electrophoresis Society Annual Meeting | 47.041 | 6,855 |
| NSF | CBET-1511431 | Rapid Prototyping and Manufacturing of Polyclonal Anti-Ebola Antibodies with Synthetic Biology and Microbioreactors | 47.041 | 26,984 |
| NSF | CCF-0844626 | ARRA - CAREER: Efficient Computation in the Physical World | 47.082 | -282 |
| NSF | CCF-0937274 | CCF-AF: Abstract MAC Layers | 47.070 | 267,517 |
| NSF | CCF-0953960 | CAREER: Towards a Constructive Theory of Networked Interactions | 47.070 | 143,908 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NSF | CCF-0964106 | SHF: Medium: Intelligent and efficient data movement for multicore systems | 47.070 | 127,719 |
| NSF | CCF-0964646 | CIF: Medium: Collaborative Research: From Retroactivity to Modularity: Design and Implementation of a Genetic Insulation Device in Yeast | 47.070 | -9,439 |
| NSF | CCF-1012042 | AF: Large: Collaborative Research: Compact Representations and Efficient Algorithms for Distributed Geometric Data | 47.070 | 48,859 |
| NSF | CCF-1017772 | CIF: Small: Theory and Codes for Intermittent and Sparse Communication | 47.070 | 55,949 |
| NSF | CCF-1036241 | EAGER: Profile and Transformation Driven Automatic Parallelization with interactive Reports | 47.070 | 23,318 |
| NSF | CCF-1058127 | CIF: Medium: Collaborative Research: From Retroactivity to Modularity: Design and Implementation of a Genetic Insulation Device in Yeast | 47.070 | 101,893 |
| NSF | CCF-1065125 | AF: Medium: Taming massive data with sub-linear algorithms | 47.070 | 391,442 |
| NSF | CCF-1101491 | A Probabilistic Look At Algorithmic Game Theory | 47.070 | 101,842 |
| NSF | CCF-1111109 | AF: Large: Collaborative Research: Algebraic Graph Algorithms: The Laplacian and Beyond | 47.070 | 228,649 |
| NSF | CCF-1111337 | AF: Large: Collaborative Research: Reliable Quantum Communication and Computation in the Presence of Noise | 47.070 | 11,764 |
| NSF | CCF-1115849 | AF: Small: New Approaches to Fundamental Problems in Network Design | 47.070 | 78,476 |
| NSF | CCF-1116362 | SHF: Small: Human-Centered Software Synthesis | 47.070 | 80,072 |
| NSF | CCF-1116372 | SHF: Small: Directory/less Shared Memory Using Execution Migration | 47.070 | 67,887 |
| NSF | CCF-1116501 | CIF: Small: Foundations for Intrinsically Secure Networks: the Role of Network Interference | 47.070 | 234,094 |
| NSF | CCF-1117381 | AF: Small: Applied Algorithms: Tech Transfer from the Algorithms Toolbox II | 47.070 | 69,142 |
| NSF | CCF-1124247 | NEB: Integrated Biological and Electronic Computation at the Nanoscale | 47.070 | 60,218 |
| NSF | CCF-1138967 | Collaborative Research: An Expedition in Computing for Compiling Functional Physical Machines | 47.070 | 1,904,408 |
| NSF | CCF-1138986 | Collaborative Research: Socially Assistive Robots | 47.070 | 369,452 |
| NSF | CCF-1139056 | Collaborative Research: Expeditions in Computer Augmented Program Engineering (ExCAPE): Harnessing Synthesis for Software Design | 47.070 | 261,112 |
| NSF | CCF-1161413 | CIF: Medium: Space-from-Time Imaging: Fundamental Limits, Algorithms, and Preliminary Demonstrations | 47.070 | 82,997 |
| NSF | CCF-1161626 | AF: Medium Collaborative Research General Frameworks for Approximation and Fixed Parameter Algorithms | 47.070 | 21,906 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | CCF-1161775 | SHF: Medium Collaborative Research Marrying Program Analysis and numerical Search | 47.070 | 308,078 |
| NSF | CCF-1216476 | CIF:Small: The Linear Information Coupling Problem | 47.070 | 184,524 |
| NSF | CCF-1217043 | CIF: Small: Message Passing Networks | 47.070 | -4,774 |
| NSF | CCF-1217423 | AF: Small: Local Computation Algorithms | 47.070 | 44,372 |
| NSF | CCF-1217498 | SHF:Small-Fine Grain Tasking and Virtual Memory for Massively Parallel Computing | 47.070 | 170,970 |
| NSF | CCF-1217501 | SHF: Small: Capitalizing on First-Class SQL Support in the Ur/Web Programming Language | 47.070 | 139,698 |
| NSF | CCF-1217506 | AF: Small: Bounded-Contention Coding for Wireless Networks | 47.070 | 97,687 |
| NSF | CCF-1217921 | SHF: Small: Multicore Data-Structures: Relaxed, Flat, and Randomized | 47.070 | 142,466 |
| NSF | CCF-1218176 | AF: Small: Physics Based Approaches to Quantum Information Science | 47.070 | 204,754 |
| NSF | CCF-1218547 | AF: Small: Sliding Scale Problems in Probabilistic Checking of Proofs | 47.070 | 93,113 |
| NSF | CCF-1231216 | A Center for Brains, Minds, and Machines: The Science and the Technology of Intelligence | 47.070 | 4,532,437 |
| NSF | CCF-1249349 | 2012 Waterman Award | 47.070 | 388,087 |
| NSF | CCF-1253205 | CAREER: Information Theory Beyond Capacity | 47.070 | 90,994 |
| NSF | CCF-1253229 | CAREER: A Formal Verification Platform Focused on Programmer Productivity | 47.070 | 153,100 |
| NSF | CCF-1301926 | SHF: Medium: Collaborative Research: Transactional Software Infrastructures: Making the Most of Hardware Transactions | 47.070 | 224,661 |
| NSF | CCF-1314547 | SHF: AF: Large: Collaborative Research: Parallelism without Concurrency | 47.070 | 237,724 |
| NSF | CCF-1317348 | Collaborative Research: Visual Cortex on Silicon | 47.070 | 189,739 |
| NSF | CCF-1318384 | SHF:Small: Scalable Memory Hierarchies with Fine-Grained QoS Guarantees | 47.070 | 200,271 |
| NSF | CCF-1318620 | CIF: Small: Collaborative Research: Combinatorial Joint Source-Channel Coding | 47.070 | 54,122 |
| NSF | CCF-1319460 | AF: Small: New Perspectives on Special Methods for Graph Algorithms | 47.070 | 42,627 |
| NSF | CCF-1319828 | CIF:Small: Theory, Algorithms, and Applications of Super-Nyquist Coding | 47.070 | 152,250 |
| NSF | CCF-1348519 | EAGER: Hybrid Analog-Digital Automata in Microbial Cells | 47.070 | 153,027 |
| NSF | CCF-1409228 | CIF: Medium: Collaborative Research: Content Delivery over Heterogeneous Networks:Fundamental Limits and Distributed Algorithms | 47.070 | 72,737 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | CCF-1420692 | AF: Small: New directions in the design of local computation algorithms | 47.070 | 36,237 |
| NSF | CCF-1420956 | AF: Small: Algebraic Tools for Coding, Complexity and Combinatorics | 47.070 | 119,318 |
| NSF | CCF-1438967 | XPS: FULL: DSD: Collaborative Research: Moving the Abyss: Database Management on Future 1000-core Processor | 47.070 | 74,824 |
| NSF | CCF-1438969 | XPS: FULL: FP: Collaborative Research: Model-based, Event Driven Scalable Programming for the Mobile Cloud | 47.070 | 97,027 |
| NSF | CCF-1442887 | CyberSEES:Type 2: Collaborative Research: Combining Experts and Crowds to Address Challenging Societal Problems | 47.070 | 207,743 |
| NSF | CCF-1452994 | CAREER: A Hardware and Software Architecture for Data-Centric Parallel Computing | 47.070 | 4,591 |
| NSF | CCF-1453261 | CAREER: Algorithmic Aspects of Machine Learning | 47.070 | 5,306 |
| NSF | CCF-1506901 | The Nineteenth International Conference on Research in Computational Molecular Biology (RECOMB 2015) | 47.070 | 12,000 |
| NSF | CHE-1019990 | The Chemical Biology of Phosphorothioate Modifications of DNA in Bacteria | 47.049 | -61 |
| NSF | CHE-1058219 | Accurate Photochemistry in the Condensed Phase | 47.049 | 75,180 |
| NSF | CHE-1058709 | The Impact of Chirped Pulse Millimeter-Wave Technology on the Spectroscopy, Dynamics, and Manipulation of Molecules in Rydberg States | 47.049 | 496 |
| NSF | CHE-1111133 | Multiple Metal-Carbon Bonds, Metallacycles and Catalytic Olefin Metathesis Reactions | 47.049 | 8,983 |
| NSF | CHE-1111357 | Synthesis Using Group 15 Elements | 47.049 | 41,147 |
| NSF | CHE-1111557 | Coherent spectroscopy and Coherent control of collective modes through shaped optical fields | 47.049 | 115,212 |
| NSF | CHE-1111567 | New Cycloaddition and Annulation Strategies for Organic Synthesis | 47.049 | 91,765 |
| NSF | CHE-1112825 | Theoretical studies of coherent energy transfer in photosynthetic systems | 47.049 | 199,236 |
| NSF | CHE-1212527 | Highly Convergent and Stereoselective Synthesis of Heterodimeric Polycyclic Alkaloids | 47.049 | 117,113 |
| NSF | CHE-1213622 | Near Infrared Fluorescent Single Walled Carbon Nanotubes as Novel Solution Phase Optical Sensing Materials | 47.049 | 39,685 |
| NSF | CHE-1265624 | Collaborative Research: SJ2-CHE:Developing First Principles Monte Carlo Methods for Reactive Phase and Sorption Equilibria in the CP2k Software Suite | 47.049 | 134,779 |
| NSF | CHE-1265770 | Metal Coordination Compounds as Reporters for Biological NO | 47.049 | 234,552 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | CHE-1306529 | Collaborative Proposal: RUI:Functionalization of Single-Walled Carbon Nanotube Nanopores for Control of Molecular and Ionic Motion and Undergraduate Training in Nanopore Transport | 47.049 | 5,455 |
| NSF | CHE-1307664 | Collaborative Research: Effects of Atmospheric Aging on the Surface vs. Bulk Composition of Atmospheric Organic Aerosol | 47.049 | 143,049 |
| NSF | CHE-1308839 | A bioanalytical platform for interrogating the systems biology of tRNA modifications: Application to defining translational control mechanisms in bacterial stress responses | 47.049 | 84,396 |
| NSF | CHE-1314022 | SEES Fellows: Recyclable Solid Supports as a Sustainable Platform Technology | 47.049 | 154,946 |
| NSF | CHE-1334703 | DMREF: Analysis and Optimization of Polymer Networks for Emerging Applications | 47.049 | 197,054 |
| NSF | CHE-1351646 | CAREER: Stable Carbenes as Surface Anchoring Groups | 47.049 | 111,240 |
| NSF | CHE-1351807 | CAREER: Using chemistry to probe anthrax toxin protein translocation | 47.049 | 185,893 |
| NSF | CHE-1352132 | CAREER: Coordination Chemistry of Zinc-Chelating S100 Proteins and Biochemistry Partnership with a Regional University | 47.049 | 114,987 |
| NSF | CHE-1361865 | Mechanisms for the Exchange of Energy between a Rydberg Electron and Its Ion-Core: Free Induction Decay Detected | 47.049 | 278,589 |
| NSF | CHE-1362118 | Pure Electronic Spectroscopy | 47.049 | 167,472 |
| NSF | CHE-1454060 | Synthesis of d- and p-Block Element Molecules, Reagents, and Precursors (revised budget) | 47.049 | 31,049 |
| NSF | CHE-1464799 | CAREER: Oxygen Reduction Catalysis at Tunable Metal Sulfide Nanofilms | 47.049 | 26,152 |
| NSF | CMMI-0846554 | New Cycloaddition and Annulation Strategies for Organic Synthesis | 47.041 | 53,228 |
| NSF | CMMI-1029260 | CAREER: New Algorithmic Approaches to Computationally Challenging Stochastic Supply Chain and Revenue Management Models | 47.041 | 71,485 |
| NSF | CMMI-1029603 | What Do Customers Like: A New Approach That Lets The Data Decide | 47.041 | 142,597 |
| NSF | CMMI-1054034 | Online Optimization for Dynamic Resource Allocation Problems | 47.041 | 133,433 |
| NSF | CMMI-1063626 | CAREER: Large Scale Stochastic Control: A Math Programming & Discrete Optimization Lens | 47.041 | 107,113 |
| NSF | CMMI-1120724 | A chemo-thermo-mechanics theory: Application to high-temperature thermal barrier coatings | 47.041 | 259,755 |
| NSF | | SNM.: Digital Optofluidic Self Assembly of Heterogeneous Metamaterials | 47.041 | |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NSF | CMMI-1129894 | Collaborative Research: Experimental and computational foundations for nonlinear pattern formation in the deposition of elastic rods | 47.041 | 70,035 |
| NSF | CMMI-1130791 | Collaborative Research: A framework for modeling and measuring collaborative creativity in engineering design teams | 47.041 | 134,717 |
| NSF | CMMI-1161893 | GOALI:Hybrid Dynamic Feedback to Design Provably Correct Driving Support Systems for Safety and Efficiency | 47.041 | 117,083 |
| NSF | CMMI-1162034 | Tractable Markdown Optimization for an E-tailer | 47.041 | 40,197 |
| NSF | CMMI-1234062 | The Power Of Limited Flexibility And Resource Pooling | 47.041 | 105,207 |
| NSF | CMMI-1234113 | DynSyst.Special_Topics/Collaborative Research: A New Braid Theoretic Approach To Uncovering Transport Barriers In Complex Flows | 47.041 | 124,347 |
| NSF | CMMI-1234169 | Templated Self-Assembly for Nanomanufacturing | 47.041 | 219,813 |
| NSF | CMMI-1235109 | DMREF-GOALI- Computational and Experimental Discovery and Development of Additives for Novel Polymer Morphology and Performance | 47.041 | 97,213 |
| NSF | CMMI-1246740 | SNM: Inverse Design of Nanostructured Heterogeneous Materials | 47.041 | 335,671 |
| NSF | CMMI-1254768 | CAREER: Novel designs for Kidney Exchange and Other Markets, in the Intersection of OR, Econ and CS | 47.041 | 63,843 |
| NSF | CMMI-1332789 | Computation of grain boundary energy landscapes as a tool for grain boundary engineering | 47.041 | 130,974 |
| NSF | CMMI-1333242 | Pilot-wave Hydrodynamics | 47.041 | 143,045 |
| NSF | CMMI-1334267 | Collaborative Research: TheDesignExchange, an interactive portal for the design community of practice | 47.041 | 14,834 |
| NSF | CMMI-1334304 | Efficient Calibration Techniques for Stochastic Traffic Simulators | 47.041 | 104,404 |
| NSF | CMMI-1335155 | Local Algorithms for Random Networks: Power, Limitations and Applications | 47.041 | 171,802 |
| NSF | CMMI-1344222 | INSPIRE: Track 1: Programming Digital Materials: Additive Assembly of Integrated Electronics | 47.041 | 341,027 |
| NSF | CMMI-1345227 | Participant Support -- Workshop: Uncovering Transport Barriers in Geophysical Flows | 47.041 | -16 |
| NSF | CMMI-1351449 | CAREER: Smart Morphable Surfaces for Aerodynamic Drag Control | 47.041 | 12,754 |
| NSF | CMMI-1351512 | CAREER: Simulation-based optimization techniques for urban transportation problems | 47.041 | 63,656 |
| NSF | CMMI-1351619 | CAREER: Advanced Mixed Integer Programming Formulations | 47.041 | 16,666 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | CMMI-1363167 | Collaborative Research: Increasing Solar Panel Adoption by Modeling the Interrelated Impacts of Design Decisions, Industry Incentives, Public Policies, and Market Response | 47.041 | 16,437 |
| NSF | CMMI-1363391 | Control-Configured Underwater Robots for Precision Multi-Axis Maneuvering | 47.041 | 128,450 |
| NSF | CMMI-1426799 | NRI: Collaborative Research: Models and Instruments for Integrating Effective Human-Robot Teams into Manufacturing | 47.041 | 42,973 |
| NSF | CMMI-1449644 | EAGER/SusChEM/Collaborative Research: Feasibility of Molten Oxide Inductolysis for Metal Alloy Processing | 47.041 | 38,339 |
| NSF | CMMI-1463732 | Transformative Skin: Controlled Electromechanical Instability on Polymer Surfaces | 47.041 | 114,637 |
| NSF | CMMI-1532136 | CAREER: Electroactive Graphene-Polymer System with Extreme Actuation and Tunable Properties | 47.041 | 22,638 |
| NSF | CMMI-1334109 | DMREF: Computational Design Principles for Functional DNA-based Materials | 47.041 | 474,200 |
| NSF | CNS-0707612 | CRI: CRID: - Development of Alloy Tools, Technology and Materials | 47.070 | 148,511 |
| NSF | CNS-0836555 | Future Innovative Network Design (FIND) Architecture Planning and Coordination | 47.070 | 0 |
| NSF | CNS-0931550 | CPS:Medium: Vehicular Cyber-Physical Systems | 47.070 | 390 |
| NSF | CNS-1016213 | CSR:Small:Incremental Sampling Methods for On-line Reactive Motion Planning With Temporal Logic Specifications | 47.070 | 17,407 |
| NSF | CNS-1017800 | TC: Small: Collaborative Research: Protecting Networks from Large-Scale Physical Attacks and Disasters | 47.070 | 3,780 |
| NSF | CNS-1040020 | FIA: Collaborative Research: Mobility First: A Robust and Trustworthy Mobility Architecture for the Future Internet | 47.070 | 10,579 |
| NSF | CNS-1040023 | FIA: Collaborative Research: NEBULA: A Future Internet that Supports Trustworthy Cloud Computing | 47.070 | -170 |
| NSF | CNS-1053143 | CAREER: System-Wide Intrusion Recovery Using Selective Re-execution | 47.070 | 53,582 |
| NSF | CNS-1065114 | CSR:Medium:Collaborative Research:Programming parallel in memory data-center applications with Piccolo | 47.070 | 45,642 |
| NSF | CNS-1111383 | NeTS:Large:Collaborative Research: HyperFlow: A Novel Hybrid IP/ Flow Architecture | 47.070 | 104,037 |
| NSF | CNS-1116209 | Nets: Small: Protection and Restoration in Wireless Mesh Networks | 47.070 | 134,394 |
| NSF | CNS-1116294 | CSR:SHF:Small:Propagator-Based Computing---A Programming Foundation for Decentralized Systems | 47.070 | 6,563 |
| NSF | CNS-1116864 | NeTS:Small:Encryption on the Air:Non-Invasive Security for Wireless Medical Devices | 47.070 | 26,045 |
| NSF | CNS-1117194 | NeTS: Small: Random Access Heterogenous MIMO Networks | 47.070 | 2,113 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | CNS-1161964 | NeTS: Medium: Cortex: Rateless Wireless Networking Using Spinal Codes | 47.070 | 181,441 |
| NSF | CNS-1205402 | CRI: CI-P: Collaborative: Reciprosody - A Repository for Prosodically Annotated Material | 47.070 | 211 |
| NSF | CNS-1212597 | NeTs: LARGE: Collaborative Research: Exploration and Exploitation in Actuated Communication Networks | 47.070 | 106,847 |
| NSF | CNS-1217048 | NeTS: Small: Toward Reducing Control Overheads in Wireless Networks | 47.070 | 130,985 |
| NSF | CNS-1219557 | Integrated Future Internet Architecture | 47.070 | 146,581 |
| NSF | CNS-1228687 | TWC: Medium: Collaborative Research: Policy Compliant Integration of Linked Data | 47.070 | 35,290 |
| NSF | CNS-1239054 | CPS: Frontiers: Collaborative Research: Foundations of Resilient Cyber-physical Systems (FORCES) | 47.070 | 600,378 |
| NSF | CNS-1239182 | CPS: Synergy: Collaborative Research: Formal Design of Semi-autonomous Cyberphysical Transportation Systems | 47.070 | 189,799 |
| NSF | CNS-1255761 | First Steps in Exploring Pervasive Persistent Identification for Information Centric Networking | 47.070 | 15,095 |
| NSF | CNS-1258691 | Future Internet Architecture Investigator Meeting | 47.070 | 5,043 |
| NSF | CNS-1258905 | Workshop on Multi-spectrum Metrics for Cyber Defense | 47.070 | 11,397 |
| NSF | CNS-1301934 | CSR: Medium: Collaborative Research: The Commutativity Rule for Scalable Systems Software | 47.070 | 91,258 |
| NSF | CNS-1317763 | TWC: Small: Ascend: Architecture for Secure Computation on Encrypted Data | 47.070 | 121,895 |
| NSF | CNS-1338976 | Project MAC@50 Symposium | 47.070 | 36,993 |
| NSF | CNS-1339471 | Workshop: Spring 2013 Future Internet Architecture investigator meeting | 47.070 | 3,506 |
| NSF | CNS-1345256 | FIA-NP: Collaborative Research: The Next-Phase MobilityFirst Project - From Architecture and Protocol Design to Advanced Services and Trial Deployments | 47.070 | 99,018 |
| NSF | CNS-1347267 | MIT VMS I-Corps Site | 47.070 | 51,054 |
| NSF | CNS-1347279 | SATC: Collaborative Research: Holistic security for cloud computing: Oblivious computation | 47.070 | 5,233 |
| NSF | CNS-1347364 | EAGER: Holistic Security for Cloud Computing: Computing on Encrypted Data | 47.070 | 104,670 |
| NSF | CNS-1350619 | CAREER: Computing on Encrypted Data | 47.070 | 53,916 |
| NSF | CNS-1350685 | CAREER: Practical Algorithms and Fundamental Limits for Complex Cyber-Physical Systems | 47.070 | 76,263 |
| NSF | CNS-1405863 | CI-P: Toward Unified Tool Support for Linguistic Corpus Annotation | 47.070 | 51,327 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NSF | CNS-1407470 | NeTS:Medium:Collaborative Research:An App-Centric Transport Architecture for the Internet | 47.070 | 30,490 |
| NSF | CNS-1409238 | CSR: Medium: Collaborative Research: FTFS: A Read/Write-optimized Fractal Tree File System | 47.070 | 84,315 |
| NSF | CNS-1413817 | Workshop:FIA investigator meeting fall 2013 | 47.070 | 10,666 |
| NSF | CNS-1413905 | NeTS:Large:Collaborative Research:Mapping Interconnection in the Internet: Colocation, Connectivity and Congestion | 47.070 | 171,967 |
| NSF | CNS-1413920 | TWC: TTP Option: Frontier: Collaborative: MACS: A Modular Approach to Cloud Security | 47.070 | 179,607 |
| NSF | CNS-1413973 | NeTS Large: Collaborative Research: Location-Independent Networks: Evaluation Strategies and Studies | 47.070 | 75,630 |
| NSF | CNS-1445299 | NSF Early Career Workshop on Exploring New Frontiers in Cyber-Physical Systems | 47.070 | 37,311 |
| NSF | CNS-1446474 | CPS: Frontier: Collaborative Research: BioCPS for Engineering Living Cells | 47.070 | 25,636 |
| NSF | CNS-1516130 | Workshop: FIA Investigator meeting Fall 2014 | 47.070 | 10,985 |
| NSF | CNS-1523401 | EAGER:Autonomy-enabled Shared Vehicles for Mobility on Demand and Urban Logistics | 47.070 | 11,554 |
| NSF | CNS-1523972 | Workshop on low latency wireless networks | 47.070 | 30,349 |
| NSF | DBI-0644282 | CAREER Comparative Genomics and Biological Signal discovery in the Human Genome | 47.074 | 113,338 |
| NSF | DBI-1103600 | NSF Postdoctoral Fellowship in Biology FY 2010 - GF for J. Giraldo | 47.074 | 1,001 |
| NSF | DBI-1120200 | MPS-BIO: Collaborative Research: Physical Mechanisms Regulating Sperm Chemotaxis | 47.074 | 187 |
| NSF | DBI-1146747 | ABI Innovation: Interactive Learning Tools for Individual Identification in Large Biological Image Databases | 47.074 | 160,646 |
| NSF | DBI-1451125 | BRAINS EAGER: Massive-scale multi-area single neuron recordings to reveal circuits underlying short-term memory | 47.074 | 61,976 |
| NSF | DEB-1145734 | Microevolution and population dynamics of <i>Prochlorococcus</i> cells in the ocean: Insights through single-cell genomics | 47.074 | 60,110 |
| NSF | DGE-0801525 | IGERT: Interdisciplinary Quantum Information Science & Engineering | 47.076 | 389,838 |
| NSF | DGE-1122374 | Graduate Research Fellowship Program | 47.076 | 13,869,070 |
| NSF | DMR-0819762 | CMSE - Parent | 47.049 | 1,248,018 |
| NSF | DMR-0845296 | ARRA - CAREER: Non-equilibrium Dynamics in Cuprate Superconductors Studied by Coherent Ultrafast Spectroscopy and Ultrafast Electron Diffraction | 47.082 | -17,260 |
| NSF | DMR-1004147 | Photophysical Studies of Nanocarbons | 47.049 | 136,131 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | DMR-1005541 | Physical Properties of Strongly Correlated Quantum Liquids | 47.049 | 47,922 |
| NSF | DMR-1005810 | Synthesis and Organization of Electronic Molecular and Polymeric Materials | 47.049 | -51 |
| NSF | DMR-1005926 | Spin Bath of a Central Spin System in Diamond: Polarization and Coherent Control | 47.049 | 29,237 |
| NSF | DMR-1006147 | Collaborative Research: Hierarchically Assembled Viral-Synthetic Hybrid Microentities | 47.049 | 147,806 |
| NSF | DMR-1007760 | Materials World Network: Triblock Terpolymers for Self-assembled Nanolithography | 47.049 | 27,508 |
| NSF | DMR-1007793 | Materials World Network: Novel Catalyst Systems for Carbon Nanotube (CNT) Synthesis and their Underlying Mechanisms | 47.049 | 13,628 |
| NSF | DMR-1054671 | CAREER: Self-Healing Under Flow: From Single Molecule Dynamics to Regenerative Scaffold Formation | 47.049 | 62,889 |
| NSF | DMR-1055583 | CAREER "Stretching" Oxides to Low Temperature Transport and Reactivity | 47.049 | 31,119 |
| NSF | DMR-1104394 | Tunneling and Bulk Resistance Measurements in the Fractional Quantum Hall States | 47.049 | -186 |
| NSF | DMR-1104498 | Physics of Strong Disorder and Correlation | 47.049 | 15,213 |
| NSF | DMR-1104610 | Mechanisms of Stress and Structure Evolution During Processing of Polycrystalline Thin Films | 47.049 | 162,430 |
| NSF | DMR-1104912 | Ferromagnetic Magneto-optical Oxides for Nonreciprocal Photonic Devices | 47.049 | -12,374 |
| NSF | DMR-1107339 | Materials World Network: Quantum Size Effects in Semiconducting V2V3 and IV-VI-based Thin Film and Bulk Structures and Control of Their Thermoelectric Properties | 47.049 | -201 |
| NSF | DMR-1150862 | Career: Connecting interface structure to interface-defect interactions in metals | 47.049 | 122,944 |
| NSF | DMR-1206323 | Perturbed Fluctuations & Patterns | 47.049 | 123,412 |
| NSF | DMR-1207469 | Investigating Two-Dimensional Systems and Surface States Under the Influence of an Internal Exchange Field and Spin-Filtering | 47.049 | 132,503 |
| NSF | DMR-1240933 | Materials World Network: Collaborative Research: Modeling Ferroelastic Strain Glasses | 47.049 | 32,937 |
| NSF | DMR-1242334 | Future Faculty Workshop: Diverse Leaders of Tomorrow | 47.049 | 52,788 |
| NSF | DMR-1253306 | CAREER: Self-Assembly of Fusion Proteins to Form Biofunctional Materials | 47.049 | 81,447 |
| NSF | DMR-1305741 | Novel Phases of Electronic Mott Insulators | 47.049 | 98,868 |
| NSF | DMR-1307064 | Structured Rigid Rod Framework Gels from Clickable Synthetic Polypeptides | 47.049 | 124,584 |
| NSF | DMR-1405221 | Quantum Transport in twisted van der Waals Heterostructures | 47.049 | 279,184 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | DMR-1410636 | Collaborative Research: Design of Low-Hysteresis High-Susceptibility Materials by Nanodomain Engineering | 47.049 | 119,615 |
| NSF | DMR-1410718 | Shape Persistent, Dynamic, and Liquid Crystalline Materials for Sensor and Electronic Devices | 47.049 | 143,513 |
| NSF | DMR-1419807 | NSF Materials Research Science and Engineering Centers (MRSEC) - Full Proposal | 47.049 | 838,842 |
| NSF | DMR-1452612 | CAREER: Small Molecule Redox Reactivity at MOF Secondary Building Units | 47.049 | 10,642 |
| NSF | DMS - 1103873 | MSPRF - K. Ormsby | 47.049 | 560 |
| NSF | DMS-0805841 | Low Dimensional Topology and Gauge Theory | 47.049 | 2,827 |
| NSF | DMS-0844188 | ARRA - CAREER: The Symplectic Category, Floer Field Theory, and Relations to Gauge Theory and Topology | 47.082 | -131 |
| NSF | DMS-0854774 | FRG: Collaborative Research: Mean curvature flow as a tool in low dimensional topology | 47.049 | 41,221 |
| NSF | DMS-0905950 | Collaborative Research: Homotopy Theory: Applications and New Dimensions | 47.049 | 93,217 |
| NSF | DMS-0943787 | EMSW21-RTG: Geometry and Topology | 47.049 | 178,339 |
| NSF | DMS-1000113 | Tensor categories, quantum groups, and Hecke algebras | 47.049 | 62,641 |
| NSF | DMS-1005288 | Cohomological methods in symplectic topology | 47.049 | 128,735 |
| NSF | DMS-1005696 | Spectral problems in semi-classical analysis, wave and heat trace asymptotics and group actions on symplectic manifolds | 47.049 | 98,276 |
| NSF | DMS-1007967 | Collaborative Research: Phantom traffic jams, continuum modeling, and connections with detonation wave theory | 47.049 | 27,206 |
| NSF | DMS-1016125 | Collaborative Research: Theory and Algorithms for Beta Random Matrices: The Random Matrix Method of Ghosts and Shadows | 47.049 | 22,578 |
| NSF | DMS-1035400 | Of Randomness and Disorder: A New Paradigm for Solar Materials Simulation | 47.049 | 10,087 |
| NSF | DMS-1056390 | Growth of Random Surfaces | 47.049 | 167,905 |
| NSF | DMS-1068625 | Studies in Algebraic and Enumerative Combinatorics | 47.049 | 152,507 |
| NSF | DMS-1069197 | Problems in Ramsey theory and extremal combinatorics | 47.049 | -78 |
| NSF | DMS-1069225 | Free Boundaries, Level Surfaces, and Stochastic Growth | 47.049 | 38,570 |
| NSF | DMS-1069236 | Random maximal isotropic subspaces and Selmer groups | 47.049 | 40,595 |
| NSF | DMS-1100147 | Algebraic and Geometric Combinatorics | 47.049 | 73,973 |
| NSF | DMS-1100943 | Representation Theory of Reductive Groups over Local Fields | 47.049 | 0 |
| NSF | DMS-1102434 | Categories of sheaves, canonical bases and harmonic analysis | 47.049 | 136,721 |
| NSF | DMS-1104000 | MSPRF - P. Hand | 47.049 | 420 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | DMS-1104032 | MSPRF - J. Bloom | 47.049 | 3,213 |
| NSF | DMS-1104392 | Mean Curvature Flow, Manifolds with Ricci curvature bounds, Representations of Isometry groups, and Eigenfunctions | 47.049 | 263,792 |
| NSF | DMS-1104690 | Contact manifolds and Heegaard Floer homology | 47.049 | 29,415 |
| NSF | DMS-1107335 | Dynamics of Nonlinear Internal Wave Beams in Stratified Flows | 47.049 | 31,504 |
| NSF | DMS-1115278 | Collaborative Research: Numerical approaches for incompressible viscous flows with high order accuracy up to the boundary | 47.049 | 59,941 |
| NSF | DMS-1115406 | Collaborative Research: A Field Expansion Method For Acoustic Scattering From Topography: Extensions to Elasticity and The Inverse Problem | 47.149 | 2,237 |
| NSF | DMS-1115455 | Computational methods in arithmetic geometry | 47.049 | 9,245 |
| NSF | DMS-1161129 | Electromagnetic Inverse Problems: Visibility and Invisibility | 47.049 | 15,725 |
| NSF | DMS-1162211 | The Global Analysis of Fluids in General Relativity | 47.049 | 35,492 |
| NSF | DMS-1209044 | Liouville quantum gravity and conformal probability | 47.049 | 116,361 |
| NSF | DMS-1238309 | MIT PRIMES: Program for Research In Mathematics, Engineering, and Science for High School Students | 47.049 | 146,646 |
| NSF | DMS-1255203 | CAREER: Super-Resolution and Subwavelength Imaging | 47.049 | 143,329 |
| NSF | DMS-1265196 | FRG: Collaborative Research: Wall-crossings in Geometry and Physics | 47.049 | 71,761 |
| NSF | DMS-1265263 | FRG: Collaborative Research: Birational Geometry and Singularities in Zero and Positive Characteristic | 47.049 | 3,093 |
| NSF | DMS-1302000 | Periods and special values of L-functions for unitary groups | 47.049 | 43,208 |
| NSF | DMS-1303060 | Mathematical Sciences: Geometric methods in the representation theory of affine Hecke algebras, finite reductive groups and character sheaves | 47.049 | 106,912 |
| NSF | DMS-1307390 | Dualizing modules in algebra and geometry | 47.049 | 1,712 |
| NSF | DMS-1307704 | Random matrices, free probability and the enumeration of maps | 47.049 | 113,185 |
| NSF | DMS-1312831 | Applied Free Probability Theory | 47.049 | 411,989 |
| NSF | DMS-1318942 | Collaborative Research: Gradient-augmented level set methods and jet schemes | 47.049 | 19,701 |
| NSF | DMS-1339299 | Foliation theory in Algebraic Geometry | 47.049 | 10,523 |
| NSF | DMS-1350472 | CAREER: Motives: Voevodsky versus Kontsevich | 47.049 | 54,266 |
| NSF | DMS-1352121 | CAREER: Extremal Combinatorics: Methods, Problems, and Challenges | 47.049 | 27,637 |
| NSF | DMS-1358171 | Representation Theory and applications to Combinatorics, Geometry and Quantum Physics | 47.049 | 3,567 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | DMS-1362326 | Random and pseudorandom structures and their applications | 47.049 | 57,856 |
| NSF | DMS-1362336 | Algebraic Combinatorics and its Applications | 47.049 | 15,386 |
| NSF | DMS-1362509 | Dispersive partial differential equations: between a deterministic and a probabilistic approach | 47.049 | 73,716 |
| NSF | DMS-1362703 | Representations of Reductive Groups, May 19-23, 2014 | 47.049 | 33,829 |
| NSF | DMS-1400967 | Algebraic theory of integrable systems. Representations of affine superalgebras and mock theta functions | 47.049 | 44,401 |
| NSF | DMS-1401207 | Noncommutative Algebraic Geometry and Noncommutative Invariant Theory | 47.049 | 16,821 |
| NSF | DMS-1406337 | Investigation on Differential Geometry and General Relativity | 47.049 | 42,957 |
| NSF | DMS-1406348 | Instantons, low dimensional topology and knotted graphs | 47.049 | 33,517 |
| NSF | DMS-1406356 | 2014-2016 Talbot Workshops | 47.049 | 38,922 |
| NSF | DMS-1406411 | Gaussian Free Field and Conformal Loop Ensemble | 47.049 | 50,364 |
| NSF | DMS-1407562 | Integrable probability and random matrices: 2d structures, limit theorems | 47.049 | 51,022 |
| NSF | DMS-1408312 | Celebration of Combinatorics: a Conference Honoring Richard Stanley | 47.049 | 24,972 |
| NSF | DMS-1408398 | Mean curvature flow and geometric analysis | 47.049 | 125,355 |
| NSF | DMS-1448873 | Perspectives in Lie Theory | 47.049 | 32,717 |
| NSF | DMS-1454419 | CAREER: Geometric Methods in Hyperbolic PDEs | 47.049 | 6,046 |
| NSF | DMS-1460466 | Representation theory, Number theory and Invariant theory | 47.049 | 8,224 |
| NSF | DMS-1541099 | CAREER: Large Scale Stochastic Optimization and Statistics | 47.049 | 21,511 |
| NSF | DRL-0744213 | CAREER: Curiosity, exploratory play, and the foundations of scientific inquiry | 47.076 | 112,776 |
| NSF | DRL-1019228 | DRK12-BioGraph: Graphical Programming for Constructing complex Systems Understanding in Biology | 47.076 | 376,415 |
| NSF | DRL-1019396 | ScratchEd: Working with Teachers to Develop Design-Based Approaches to the Cultivation of Computational Thinking | 47.076 | 239,348 |
| NSF | DRL-1020152 | Collaborative Research: INK-12: Teaching and Learning Using Interactive Ink Inscriptions in K-12 | 47.076 | 198,054 |
| NSF | DRL-1118682 | Collaborative Research: ScratchJr: Computer Programming in early childhood education as a pathway to academic readiness and success | 47.076 | -14 |
| NSF | DRL-1223256 | Collaborative Research: Broad Implementation of Science Festival Alliance | 47.076 | 363,137 |
| NSF | DRL-1322623 | Full-Scale Development: Collaborative Research: NEXT: The Youth Radio Innovation Lab | 47.076 | 157,948 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NSF | DRL-1417952 | Collaborative Research: New Pathways into Data Science: Extending the Scratch Programming Language to Enable Youth to Analyze and Visualize Their Own Learning | 47.076 | 112,606 |
| NSF | DRL-1418122 | Collaborative Research: Revealing the Invisible: Data-Intensive Research Using Cognitive, Psychological, and Physiological Measures to Optimize STEM Learning | 47.076 | 203 |
| NSF | DUE-1122616 | Development and evaluation of StarCellBio: a cell biology experiment simulator for science education | 47.076 | 57,862 |
| NSF | DUE-1225680 | Collaborative Research: Computational Thinking through Mobile Computing | 47.076 | 90,197 |
| NSF | DUE-1439272 | Learning Sciences and Online Learning - Interaction and Influence for Quality Practice and Research | 47.076 | 114,104 |
| NSF | DUE-1451399 | Liberal Studies in engineering: Broadening the Path to the Profession. Phase I | 47.076 | 50,686 |
| NSF | EAR-0807475 | Collaborative Research: The Siberian Traps and the End-Permian Extinction: Coincidence and Causality | 47.050 | 67,744 |
| NSF | EAR-0807585 | Collaborative Research: The Siberian Traps and the End-Permian Extinction: Coincidence and Casualty | 47.050 | 27,049 |
| NSF | EAR-0930166 | Collaborative Research: Analytical Techniques and Software: Development of Cyberinfrastructure to Support Laser-Ablation ICP Mass Spectrometry | 47.050 | 52,314 |
| NSF | EAR-0946280 | Environmental Determinants of Malaria Transmission in Africa: Hydrology of water Pools Near Villages | 47.050 | 126,035 |
| NSF | EAR-0947969 | Collaborative Research: Space-Based Measurements of Crustal Deformation Along the Entire Dead Sea Fault System (Eastern Mediterranean) | 47.050 | 2,151 |
| NSF | EAR-0948388 | Collaborative Research: tectonic links, magma fluxes, and single mineral geochemistry in plutonic magmatic systems from 5-30 km depth, Cascades core, | 47.050 | -2 |
| NSF | EAR-0951672 | Field and numerical studies of self-organization in high-order drainage networks | 47.050 | 112,377 |
| NSF | EAR-0968863 | Collaborative Research: CSEDI - Grand Challenge for Experimental study of Plastic Deformation Under Deep Earth Conditions | 47.050 | 5,229 |
| NSF | EAR-1024196 | Collaborative Research: High-Precision U-Pb Zircon Geochronology of the Late Triassic Chinle Fluvial System of the Colorado Plateau | 47.050 | -95 |
| NSF | EAR-1045193 | Collaborative Research: Characterization and Mechanistic Modeling of Methane Production, Flow and Ebullition from Fine-Grained Sediments in a Temperature Lake | 47.050 | 10,134 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NSF | EAR-1114161 | Collaborative Research: Water and Carbon Dynamics in Tropical Peat Lands - Comparison of a Forested Peat Dome with A Deforested Peat Dome in Borneo | 47.050 | 30,172 |
| NSF | EAR-1118562 | Microstructure in Marble: Evolution of strength in natural and laboratory deformation | 47.050 | 50,835 |
| NSF | EAR-1118598 | Experimental Investigations on the Role of H2O in Subduction Zone Processes | 47.050 | 113,353 |
| NSF | EAR-1118883 | Collaborative Research: Evaluating the Influence of Eocene Ridge Subduction on Magmatism, Deformation, and Basin Evolution, Pacific NW | 47.050 | 33,992 |
| NSF | EAR-11140970 | The Impact of Blade Motion on the Flux to a Blade Surface | 47.050 | 61,222 |
| NSF | EAR-11144883 | EAR-PF: Characterizing small changes in the Earth from time-reversed multiply-scattered Rayleigh waves - PDF-D.Mikesell | 47.050 | 3,598 |
| NSF | EAR-11159318 | Physiological underpinnings of sulfur isotope effects produced by sulfate reducing microbes | 47.050 | 35,711 |
| NSF | EAR-1219778 | Collaborative Research: Absolute-dated records of Lake Quaternary paleohydrology in the bonneville Basin, western U. S., from novel archives | 47.050 | -4,270 |
| NSF | EAR-1225865 | Collaborative research: Laboratory and numerical experiments on the response of wave ripples to changes in oscillatory flow | 47.050 | 156,833 |
| NSF | EAR-1226293 | EAGER: Determining When Earth's Magnetic Field Originated | 47.050 | -3,469 |
| NSF | EAR-1246577 | Collaborative Proposal: Postseismic deformation of the Izmit-Duzce, Turkey earthquake sequence: implications for the mechanics of the earthquake cycle and rheology of the continental lithosphere | 47.050 | 33,630 |
| NSF | EAR-1250394 | Application of quantum cascade laser-infrared absorption spectroscopy for methane clumped isotope thermometry using doubly isotope substituted methane (13CH3D) | 47.050 | 57,455 |
| NSF | EAR-1321889 | Influence of Titanium on Water Incorporation, Rheology and Seismic Properties of Olivine | 47.050 | 128,418 |
| NSF | EAR-1321952 | Collaborative Research: Early earth evolution: Hf and Nd isotopic constraints from the ca 3.4--4.0 Ga Acasta Gneisses | 47.050 | 77,492 |
| NSF | EAR-1322032 | A field study of the liquid line of descent of hydrous alkaline-rich magmas at elevated pressures (0.5-1.0 GPa): the Dariv alkaline intrusive complex | 47.050 | 101,709 |
| NSF | EAR-1338318 | ELT Collaborative Research: Perturbation of the Marine Food Web and Extinction During the Oceanic Anoxic Event at the Cenomanian/Turonian Boundary | 47.050 | 9,140 |
| NSF | EAR-1347282 | Collaborative Research: Active Kinematics of Lithospheric Extension Along the East African Rift | 47.050 | 33,043 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | EAR-1361319 | CSEDI Collaborative Research: Grand Challenge for Experimental Study of Plastic Deformation Under Deep Earth Conditions | 47.050 | 10,788 |
| NSF | EAR-1404414 | Collaborative Research: Deep Drilling of Lake Junin, Peru: Continuous Tropical Records of Glaciation, Climate Change and Magnetic Field Variations Spanning the Late Quaternary | 47.050 | 12,938 |
| NSF | EAR-1414499 | Sediment Transport in Vegetated Channels: Evaluating the Roles of Mean Bed Stress and Turbulent Impulse | 47.050 | 92,892 |
| NSF | EAR-1415907 | High-resolution attenuation structure from the ambient seismic field | 47.050 | 160,358 |
| NSF | EAR-1419822 | Collaborative Research: Quantifying Laurentia's Motion, Advancing Paleogeography and Constraining Rifting with New Paired Dates and Paleomagnetic Data from the Midcontinent Rift | 47.050 | 23,554 |
| NSF | EAR-1419854 | Active Tectonics of the Africa-Eurasia Zone of Plate Interaction in the W Mediterranean | 47.050 | 47,724 |
| NSF | EAR-1434138 | Collaborative Research: Reconstructing interactions between the East Asian Monsoon and Westerly Jet at multiple timescales via the flux and provenance of eolian and fluvial supply | 47.050 | 50,572 |
| NSF | EAR-1439559 | Early Career: Technical support for a uranium-series isotope geochemistry laboratory focused on Earth's climate and surface processes | 47.050 | 44,910 |
| NSF | EAR-1464024 | Collaborative Research: Anelastic properties of the Earth from seismic to tidal timescales | 47.050 | 11,408 |
| NSF | EAR-1523027 | Comparison of the Melt Distribution in Natural Analogues to Experimentally Produced microstructures | 47.050 | 29,071 |
| NSF | EAT-1321796 | Active deformation in the Arabia-Eurasia continental collision zone | 47.050 | 85,865 |
| NSF | ECCS-0844994 | ARRA - CAREER: Circuit and System Techniques for High-Throughput, Energy-efficient Silicon Photonic Interconnects in Advanced VLSI Systems | 47.082 | 77,270 |
| NSF | ECCS-1001994 | Organic Polariton Microcavities for Ultra-Low Energy Switching | 47.041 | 1,064 |
| NSF | ECCS-1027905 | A New Paradigm for Understanding and Controlling Systemic Risks in Financial Markets | 47.041 | 79,887 |
| NSF | ECCS-1027922 | Novel Game-Theoretic Tools and Solution Concepts with Applications to Network Dynamics and Control | 47.041 | 123,668 |
| NSF | ECCS-1102050 | EPAS: Hierarchical Characterization of Optoelectronic Hyperdoped Silicon Devices for Terawatt-Scale Photovoltaics | 47.041 | 109,892 |
| NSF | ECCS-1128147 | Decision making under coupled multi-timescale uncertainty: advanced electric power systems planning | 47.041 | 0 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | ECCS-1128222 | Engineering and Physics of Superconducting Nanowire Single-Photon Detectors | 47.041 | -17,703 |
| NSF | ECCS-1128437 | Collaborative Research: Power Grid Spectroscopy | 47.041 | 30,265 |
| NSF | ECCS-1135843 | CPS:Medium:Collaborative Research:Smart Power Systems of the Future:Foundations for Understanding Volatility and Improving Operational Reliability | 47.041 | 99,780 |
| NSF | ECCS-1150493 | CAREER: Active Transducers for MEMS Resonators in Integrated Circuit Technology | 47.041 | 29,205 |
| NSF | ECCS-1150878 | CAREER: Toward robust, scalable, and non-intermittent solar power: Silicon-based multijunction devices with integrated photocatalysis | 47.041 | 65,528 |
| NSF | ECCS-1201649 | High Temperature Terahertz Quantum Cascade Lasers | 47.041 | 166,844 |
| NSF | ECCS-1231348 | Collaborative Research: Monolithic on-chip resonant cavity isolators for photonic integrated circuits | 47.041 | 23,438 |
| NSF | ECCS-1307699 | Advanced Technologies for Ultra-Efficient Grid-Level Power Converters | 47.041 | 122,151 |
| NSF | ECCS-1344005 | EAGER: Super-Resolution Microscopy and Quantum Assisted Sensing Using Multifunctional Diamond Nanoprobes | 47.041 | 125,503 |
| NSF | ECCS-1348328 | Collaborative Research: ARI-LA: Low-Dose Inspection for Nuclear Threats Using Monochromatic Gamma-Rays | 47.041 | 342,278 |
| NSF | ECCS-1408172 | Spin-Optronics: Interfacial Design of Spintronic Materials and Devices | 47.041 | 148,527 |
| NSF | ECCS-1408495 | Integrated Photonics for Trapped Ion Quantum Information Processing | 47.041 | 61,570 |
| NSF | ECCS-1449291 | SNM: Knowledge-based Continuous and Scalable Manufacture of Quantum Dots | 47.041 | 236,415 |
| NSF | ECCS-1453218 | CAREER: Glass-Based Flexible Integrated Photonic Devices | 47.041 | 53,520 |
| NSF | EECS-1128439 | Electric Field Control of Spin Dynamics in Metal Spintronic Devices | 47.041 | -1,187 |
| NSF | EECS-1135815 | CPS: Medium: Collaborative Research: Co-Design of Multimodal CPS Architectures and Adaptive Controllers | 47.041 | 98,030 |
| NSF | EF-1137306 | Type 2: The Future of Ecosystems and Extremes: Using Diverse Environmental Data Sets in Support of Regional to Global Earth System Models and Predictions | 47.074 | 656,660 |
| NSF | EFRI-1023152 | Layered Systems, Industries and Organizations | 47.041 | -81 |
| NSF | EFRI-1240383 | EFRI-ODISSEI: Programmable Origami for Integration of Self-Assembling Systems in Engineered Structures | 47.041 | 218,181 |
| NSF | EFRI-1332250 | EFRI-BioFlex: A Flexible Glucose Fuel Cell. | 47.041 | 326,025 |
| NSF | EFRI-1441301 | RIPS Type 2: Collaborative Research: Towards resilient computational models of electricity-gas ICI | 47.041 | 388,209 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NSF | IIP-1414293 | PFI: AIR - TT: A Platform for Multi-Material Fabrication | 47.041 | 125,912 |
| NSF | IIP-1449113 | Workshop: PFI: BIC Smart Service Systems Grantees Meeting and Workshop toward Building a Rigorous Research Agenda for Service Systems. | 47.041 | 114,731 |
| NSF | IIP-1522517 | I-Corps: BioBright - A platform for real-time tracking of biological experiments | 47.041 | 18,609 |
| NSF | IIS-0746194 | CAREER: Machine Learning Control of Underactuated Mechanical Systems | 47.070 | -49 |
| NSF | IIS-0835652 | CDI-Type II: Exploiting Collective Human Knowledge to understand and Evolve Complex Networked Systems | 47.070 | 124,006 |
| NSF | IIS-0904594 | Computational Mechanisms for Storing Motor Memories in Noisy Neural Circuits: How Activity Patterns Evolve during Learning | 47.070 | 945 |
| NSF | IIS-0963285 | Collaborative Research: Measuring Collective Intelligence | 47.070 | 7,221 |
| NSF | IIS-1010363 | US-German Collaboration: The Role of Astrocytes in Information Processing | 47.070 | 70,890 |
| NSF | IIS-1016862 | RI: Small: Hierarchical Visual Scene Understanding | 47.070 | 58,440 |
| NSF | IIS-1017862 | High resolution tactile sensing | 47.070 | 3,333 |
| NSF | IIS-1017992 | RI: Small: Plan Execution for Continuous Dynamical Risk Bounds | 47.070 | 16,550 |
| NSF | IIS-1018055 | HC: Small: Enabling and Exploring Natural Interaction | 47.070 | 38,685 |
| NSF | IIS-1028163 | CDI-Type II: Collaborative Research: A Paradigm Shift in Ecosystem & Environmental Modeling: An Integrated Stochastic, Deterministic & Machine Learning Approach | 47.070 | 1,476 |
| NSF | IIS-1029585 | Collaborative Research: Behavior Imaging: Enabling a Quantitative Science of Behavior through Computational Sensing | 47.070 | 401,710 |
| NSF | IIS-1053398 | CAREER Digital Privacy and Regulation | 47.070 | 113,699 |
| NSF | IIS-1064495 | CAREER: Computing for Advanced Identity Representation | 47.070 | 32,163 |
| NSF | IIS-1065079 | SHB: Collaborative Research: Medium: Novel Computational Techniques for Cardiovascular Risk Stratification | 47.070 | 181,339 |
| NSF | IIS-1065219 | III: Medium Scalable and Secure Database as a Service | 47.070 | 250,587 |
| NSF | IIS-1111044 | Collaborative Research: Programming with Crowds: Models and Tools for General-Purpose Crowdsourcing | 47.070 | 151,625 |
| NSF | IIS-1111371 | III Large: Collaborative Research: SciDB- An Array oriented Data Management System for Massive Scale Scientific Data | 47.070 | 160,730 |
| NSF | IIS-1111415 | RI: Large: Collaborative Research: Analyzing images through time | 47.070 | 232,904 |
| NSF | IIS-1115680 | CGV: RI: Small: Inverse Light Transport under Femto-Photography and Transient Imaging | 47.070 | 23,235 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | IIS-1116057 | Collaborative Research:HCC:Small:Cloud Primer: Leveraging Common Sense Computing to Learn Parent-Child Interaction Models for Easy Childhood Literacy | 47.070 | 4,291 |
| NSF | IIS-11116296 | HCC:CGV:Small:Collaborative Research:From Virtual to Real | 47.070 | 4,952 |
| NSF | IIS-11116303 | CGV: Small: Collaborative Research: Sparse Reconstruction and Frequency Analysis for Computer Graphics Rendering and Imaging. | 47.070 | -491 |
| NSF | IIS-11116452 | Collaborative Research:CGV:RI:Small:AdaCID:Adaptive Coded Imaging and Displays | 47.070 | -2,327 |
| NSF | IIS-11117093 | HCC:Small:Packaging Optimization for Next-Generation Implantable Human-Computer Interface Devices | 47.070 | 11,882 |
| NSF | IIS-11117178 | RI:Small:Collaborative Research:Adaptive Sampling with Robots for Marine Observations | 47.070 | 123,310 |
| NSF | IIS-11117325 | RI:Small:Hierarchical Planning For Robots In Complex Uncertain Domains | 47.070 | 24,748 |
| NSF | IIS-1122886 | DIP: Collaborative Research: Social Robots as Mechanisms for Language Instruction, Interaction, and Evaluation in Pre-School Children | 47.070 | 221,536 |
| NSF | IIS-1133224 | EAGER: Underwater Optical Communication and Perception | 47.070 | 4,338 |
| NSF | IIS-1161731 | CGV: Medium: Collaborative Research: Understanding Translucency: Physics, Perception, and Computation | 47.070 | 123,063 |
| NSF | IIS-1161909 | RI: Medium: Collaborative Research: Hybrid Unmanned Aerial Vehicles that Interact with Surfaces | 47.070 | 2,607 |
| NSF | IIS-1212849 | RI: Large: Collaborative Research: Reconstructive recognition: Uniting statistical scene understanding and physics-based visual reasoning | 47.070 | 45,198 |
| NSF | IIS-1218411 | CGV: Small: Collaborative Research: Diffractive masks and algorithms for light field capture | 47.070 | 143,978 |
| NSF | IIS-1226883 | NRI-Large: Collaborative Research: Soft Compliant Robotic Augmentation for Human-Robot Teams | 47.070 | 112,879 |
| NSF | IIS-1227504 | Collaborative Research: NRI-Large: Purposeful Prediction: Co-robot Interaction via Understanding Intent and Goals | 47.070 | 52,585 |
| NSF | IIS-1237136 | SHB:Type II (INT): Collaborative Research: Algorithmic Approaches to Personalized Health Care | 47.070 | 174,348 |
| NSF | IIS-1248066 | INSPIRE: Kreyol-based Cyberlearning for a New Perspective on the Teaching of STEM in local Languages | 47.070 | 146,747 |
| NSF | IIS-1250802 | EAGER: Collaborative Research: Technology to Support Mathematical Argumentation | 47.070 | 104,019 |
| NSF | IIS-1317445 | NRI:Small:Collaborative Research: Adaptive Motion Planning and Decision-Making for Human-Robot Collaboration in Manufacturing | 47.070 | 44,426 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NSF | IIS-1318215 | HCC:Small:Thermal Displays in Human Computer Interactions | 47.070 | 120,255 |
| NSF | IIS-1318392 | RI: Small: Robust and Long-Term Visual Mapping and Localization | 47.070 | 138,600 |
| NSF | IIS-1329776 | CRCNS 2013 PI meeting at MIT, Cambridge, MA | 47.070 | -17 |
| NSF | IIS-1348911 | INDP: Collaborative Research: Coding for All: Interest-Driven Trajectories to Computational Fluency | 47.070 | 306,454 |
| NSF | IIS-1350160 | CAREER: Human-Aware Autonomy for Team-Oriented Environments | 47.070 | 11,755 |
| NSF | IIS-1350879 | CAREER: Gait Transition Principles in Quadruped Robots | 47.070 | 90,961 |
| NSF | IIS-1404494 | SCH: EXP: Collaborative Research: Think - Inferring Cognitive State From Subtle Behaviors | 47.070 | 17,655 |
| NSF | IIS-1405259 | NRI-Small: Improved safety and reliability of robotic systems by faults/anomalies detection from uninterpreted signals of computation graphs | 47.070 | 170,945 |
| NSF | IIS-1409310 | CHS: Medium: Collaborative Research: Computational Design and 3D Printing of Textiles | 47.070 | 229,422 |
| NSF | IIS-1420122 | CHS: CGV: Small: Collaborative Research: Sampling and Reconstruction for Computer Graphics Rendering and Imaging | 47.070 | 113,842 |
| NSF | IIS-1421065 | RI: Small: Enabling robust visual intelligence using propagators to model human competence | 47.070 | 132,218 |
| NSF | IIS-1427050 | NRI: Collaborative: Efficient Algorithms for Contact-Aware State Estimation | 47.070 | 109,179 |
| NSF | IIS-1427547 | NRI: Collaborative: Modeling and Verification of Language-based Interaction | 47.070 | 65,217 |
| NSF | IIS-1439355 | CAREER: Social and Economic Consequences of Information Diffusion in Networks | 47.070 | 85,372 |
| NSF | IIS-1447786 | BIGDATA: IA: DKA: Collaborative Research: High-Throughput Connectomics | 47.070 | 197,530 |
| NSF | IIS-1452019 | EAGER: Compact Roadmaps for Planning Under Uncertainty | 47.070 | 48,109 |
| NSF | IIS-1453141 | CAREER: Advances in Monitoring Human Performance: Moving Wearable Technology from the Expert to Nonexpert User | 47.070 | 24,965 |
| NSF | IOS-1146634 | Collaborative Research: evolution of Multicellularity: Fluid Mechanics of Feeding by Unicellular vs. Multicellular Choanoflagellates | 47.074 | 79,038 |
| NSF | IOS-1451202 | BRAIN EAGER: Cell-type-specific optogenetics in wild-type animals | 47.074 | 107,964 |
| NSF | MCB-0844442 | Career Dissecting the Molecular Determinants of Specificity in Two Component Signal Transduction Systems | 47.074 | -2,809 |
| NSF | MCB-0950233 | Coiled-coil modules for molecular engineering and synthetic biology | 47.074 | 20,151 |

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| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NSF | MCB-1331195 | Collaborative Research: Nitroplast: A Light-Driven, Synthetic Nitrogen-Fixing Organelle | 47.074 | 113,626 |
| NSF | MCB-1337431 | Creating a Research Agenda for the Ecological Implications of Synthetic Biology | 47.074 | -18,281 |
| NSF | MCB-1350625 | CAREER: Deciphering and Engineering Biological State Machines with Synthetic Biology | 47.074 | 100,806 |
| NSF | MCB-1408243 | Systematic Mapping of the Sequence Space Critical to Bacterial Signal Transduction | 47.074 | 33,257 |
| NSF | OCE-0961713 | Collaborative Research: The Physics and Statistics of Global Sea Level Change | 47.050 | 210,856 |
| NSF | OCE-1024198 | CMG Collaborative Research: From internal waves to mixing in the ocean | 47.050 | 949 |
| NSF | OCE-1029900 | The Biogeography of primary producers in the subpolar North Atlantic | 47.050 | 9,980 |
| NSF | OCE-1048926 | Collaborative Research Type 2 - MOBY: Modeling Ocean Variability and Biogeochemical Cycles | 47.050 | 467,186 |
| NSF | OCE-1061160 | Collaborative Research: Causes and Effects of Shelf-edge Internal Tide Variability | 47.050 | 53,695 |
| NSF | OCE-1129359 | Linking single-cell growth rates and genomics of bacterioplankton | 47.050 | 15,733 |
| NSF | OCE-1129746 | Collaborative Research: Submarine Melting of Greenland's Glaciers: What are the relevant ocean dynamics? | 47.050 | -4,819 |
| NSF | OCE-1129757 | Assessing the importance of deep ocean topographic scattering of low mode internal tides | 47.050 | -223 |
| NSF | OCE-1153588 | Nitrate assimilation and the ecology of Prochlorococcus: Features and implications of intraspecific diversity in a model marine phototroph | 47.050 | 90,361 |
| NSF | OCE-1155205 | Collaborative Research: Forcing and the North Atlantic Spring Bloom | 47.050 | 170,099 |
| NSF | OCE-1155295 | Models of the Ocean Carbonate cycle and the Glacial-Interglacial CO2 Variations | 47.050 | 220,746 |
| NSF | OCE-1232725 | 4D Imaging of Oceanic Transform Fault Material Properties Variations During the Earthquake Cycle | 47.050 | 53,724 |
| NSF | OCE-1233257 | Collaborative Research: Experimental Study of Mineral-Fluid Fractionation of Non-Traditional Isotopes (Fe, Cu, Zn, S) with Implications for Seafloor Hydrothermal Systems | 47.050 | 21,898 |
| NSF | OCE-1233749 | Collaborative Research: GEOTRACES Pacific section: Spatial variability of lead concentrations and isotopic compositions in the Eastern Tropical South Pacific | 47.050 | 92,329 |
| NSF | OCE-1233832 | Collaborative Research: Diagnosing Eddy mixing in DIMES | 47.050 | 254,155 |

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|----------------|----------------------------|---|--------|-------------|
| NSF | OCE-1259388 | Ocean carbon reservoirs and the air-sea flux of CO2 in a changing climate | 47.050 | 242,752 |
| NSF | OCE-1265343 | Mapping Saharan dust fluxes through the onset and termination of the African Humid Period in a transect of African margin cores | 47.050 | 13,278 |
| NSF | OCE-1315201 | Collaborative Research: Ocean Acidification: Impacts of Evolution on the Response of Phytoplankton Populations Rising CO2 | 47.050 | 38,653 |
| NSF | OCE-1338814 | FESD Type 1: The impact of the ozone hole on the climate of the Southern Hemisphere | 47.050 | 849,877 |
| NSF | OCE-1356460 | Membrane vesicles produced by marine bacteria: origins, distributions, and functions | 47.050 | 84,026 |
| NSF | OCE-1357224 | Filling Gaps in the Atlantic and Pacific Pb and Pb Isotope Spatial and Temporal Evolution | 47.050 | 157,955 |
| NSF | OCE-1357434 | The vertical propagation of internal waves through the ocean | 47.050 | 45,886 |
| NSF | OCE-1434007 | Size structure and function of phytoplankton communities in a changing ocean | 47.050 | 54,593 |
| NSF | OCE-1434149 | Collaborative Research: Submarine Melting and Freshwater Export in Greenland's Glacial Fjords: The Role of Subglacial Discharge, Fjord Topography and Shelf Properties | 47.050 | 61,975 |
| NSF | OCE-1435993 | Collaborative Research: How can bacterial viruses succeed in the marine environment? | 47.050 | 71,057 |
| NSF | OCE-1459287 | Collaborative Research: GEOTRACES Arctic section: Spatial variability of lead concentrations and isotopic compositions in the western Arctic basins | 47.050 | 19,854 |
| NSF | OCI-0904338 | ARRA - Petascale Artic, Atlantic and Antarctic Virtual Experiment | 47.082 | 2,684 |
| NSF | OCI-1027848 | CDI-Type II: Collaborative Research: Preparing the Next Generation of Computational Thinkers: Transforming Learning and Education through Cooperation in Decentralized Networks | 47.080 | 484 |
| NSF | OCI-1047955 | SI2-SSE: SciDB- A Scientific Data Management System | 47.080 | 50,636 |
| NSF | OCI-1135423 | Collaborative Research: CI-TEAM Demo: Harnessing Cyberinfrastructure for K-12 STEM Education | 47.080 | 16,541 |
| NSF | OCI-1147503 | SI2-SSI Collaborative Research: A Computational Materials Data and Design Environment. | 47.080 | 73,224 |
| NSF | OCI-1152538 | A Research Coordination Network Dedicated to Facilitating the Creation and Transfer of Knowledge | 47.080 | 35,799 |
| NSF | OISE-1258574 | G8 Initiative: Structural Bamboo Products | 47.079 | 122,971 |
| NSF | PHY-0967299 | Research in Theoretical Elementary Particle Physics | 47.049 | 67,079 |
| NSF | PHY-0969311 | Stongly Interacting Quantum Mixtures of Ultracold Atoms | 47.049 | 196,702 |
| NSF | PHY-0969731 | A Program in Ultra-Low-Temperature Atomic Physics | 47.049 | 409,100 |

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FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NSF | PHY-1004592 | Exploring Spin-Dependent Interactions of Dark Matter with DMTPCino | 47.049 | 174,475 |
| NSF | PHY-1027890 | CDI-Type I: Collaborative Research: High-dimensional phase-space subdivisions for seismic imaging | 47.049 | -6,612 |
| NSF | PHY-1055154 | CAREER: Exploration of Evolutionary Dynamics on Rugged Fitness Landscapes | 47.049 | 139,646 |
| NSF | PHY-1068720 | Gravitational-wave and strong-gravity astrophysics | 47.049 | -47 |
| NSF | PHY-1068772 | Quantum Opto-mechanics on Multiple Scales | 47.049 | 110,997 |
| NSF | PHY-1125846 | Center for Ultracold Atoms | 47.049 | 2,165,180 |
| NSF | PHY-1148134 | EAGER: H2+ Ion Source Studies at the BEST Cyclotrons, Inc. Test Stand | 47.049 | -27,524 |
| NSF | PHY-1201896 | Collaborative Research: Understanding Turbulent Mixing in Laboratory Magnetospheres | 47.049 | 70,194 |
| NSF | PHY-1205100 | Project 8: Measuring Neutrino Masses Using Radio-Frequency Techniques | 47.049 | 89,584 |
| NSF | PHY-1205175 | Neutrino Physics at MIT | 47.049 | 436,689 |
| NSF | PHY-1205554 | Atomic Ensembles Entangled by Light for Measurements Below the Standard Quantum Limit | 47.049 | 97,881 |
| NSF | PHY-1305537 | Inferring the Physics of Living Systems from Dynamic Light Microscopy Data | 47.049 | 114,538 |
| NSF | PHY-1305841 | Data Analysis of the MiniCLEAN Dark Matter Experiment | 47.049 | 6,155 |
| NSF | PHY-1306550 | Flavor Physics at the LHC | 47.049 | 76,159 |
| NSF | PHY-1403261 | Strong-gravity binary phenomenology and gravitational-wave astronomy | 47.049 | 203,155 |
| NSF | PHY-1404245 | Quantum Optomechanics on Multiple Mass Scales | 47.049 | 95,871 |
| NSF | PHY-1408089 | Dark Matter and Neutrino Physics with Cryogenic Detectors | 47.049 | 6,965 |
| NSF | PHY-1415345 | Spin Polarization and Transport at the Nanoscale | 47.049 | 80,096 |
| NSF | PHY-1415514 | Dynamic Decoupling and Noise Characterization in Superconducting Qubits | 47.049 | 48,995 |
| NSF | PHY-1437402 | MRI Consortium: Collaborative Research: Development of the Phase-I DarkLight Experiment at Jefferson Laboratory | 47.049 | 79,683 |
| NSF | PHY-1505855 | The EPP-Supported Neutrino Program at MIT | 47.049 | 30,177 |
| NSF | PLR-1304050 | Collaborative Research: A Bering Strait Ocean Observing System for the Pacific Inflow to the Arctic a fundamental part of the Arctic Observing Network | 47.050 | 9,141 |
| NSF | SBE-0965364 | Collaborative Research: New Methods to Enhance Our Understanding of the Diversity of Science | 47.075 | 767 |
| NSF | SES-1024619 | Complexity, Uncertainty, and Macroeconomic Policy in the Global Economy | 47.075 | 86,772 |

Appendix A1
Massachusetts Institute of Technology
Federal Research Support - On Campus
FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|--|--------|-------------|
| NSF | SES-1056580 | Dark Energy, Fine-Tuning, and the Multiverse: Testing Theories in Modern Cosmology - PDF for A. Friedman | 47.075 | 5,456 |
| NSF | SES-1061841 | Collaborative Research: Nonparametric Distributional and Quantile Methods in Econometrics | 47.075 | 19,706 |
| NSF | SES-1061889 | Collaborative Research on Kidney Exchange with NBERI | 47.075 | 67,463 |
| NSF | SES-1125858 | Doctoral Dissertation Research: An Empire of Purity: Making the Modern Sugar Economy, 1875-1925 - GF for D. Singerman | 47.075 | 0 |
| NSF | SES-1132399 | Unrestricted Individual Heterogeneity in Three Econometric Models | 47.075 | 119,346 |
| NSF | SES-1155143 | Collaborative Research: The American Mass Public in the Early Cold War Years | 47.075 | 91,990 |
| NSF | SES-1223187 | Doctoral Dissertation Research in Political Science: Citizen Input, Policy Outcomes, and Local Representation in the U.S. - GF for M. Sances | 47.075 | 25 |
| NSF | SES-1226924 | Collaborative Proposal: Unintended Consequences of Behavior Change: An Examination of the Impacts on Child Health of Behavior Change in Response to Arsenic Mitigation in Bangladesh | 47.075 | 40,572 |
| NSF | SES-1260744 | Intermediation, Information, and Diversity In Networks | 47.075 | 83,054 |
| NSF | SES-1330353 | Doctoral Dissertation Research: Digital Forensics Software and the Anti-Trafficking Network | 47.075 | 6,369 |
| NSF | SES-1330398 | Doctoral Dissertation Research: Disability's Star-Children: Autism and the Remaking of the Moral Order in Urban China | 47.075 | 4,516 |
| NSF | SES-1353714 | Doctoral Dissertation Research: Platformizing Higher Education: EdX and the Promise of MOOC Infrastructure | 47.075 | 13,380 |
| NSF | SES-1424484 | Doctoral Dissertation Research: Ethical Issues in Animal Experimentation | 47.075 | 4,018 |
| NSF | SES-1427231 | Demand Analysis for Matching Markets | 47.075 | 15,179 |
| NSF | SES-1429914 | Doctoral Dissertation Research: Conservation Science--Two Case Studies in Wetland Monitoring and Management | 47.075 | 1,111 |
| NSF | SES-1451178 | An Investigation of Mutual Interactions between the Practice of Chinese Medicine and Biomedicine - PDF Lan Li | 47.075 | 3,836 |
| NSF | SES-1456130 | Doctoral Dissertation Research: A Case Study of Traveling Abroad to Access Reproductive Technologies. | 47.075 | 4,143 |
| NSF | SMA-1158765 | Managing Community: The Organization and Management of Federal Research Funding Agencies | 47.075 | 48,563 |
| NSF | SMA-1262263 | Collaborative Research: Technology, Collaboration, and Learning: Modeling Complex International Innovation Partnerships | 47.075 | 115,838 |
| NSF | SMA-1415129 | SEES Fellowship - PDF - S. Pattinson | 47.075 | 81,605 |

Appendix A1
Massachusetts Institute of Technology
Federal Research Support - On Campus
FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|---|----------------------------|---|--------|--------------------|
| NSF | SMMI-1346638 | CAREER: High-Speed Continuous Assembly of Nanoparticle Monolayers and Discrete Cluster Arrays | 47.041 | 69,049 |
| | | Total for National Science Foundation | | 79,511,576 |
| | | TOTAL for National Science Foundation | | 79,511,576 |
| TOTAL Federal Research Support - On Campus | | | | 388,198,409 |

Appendix A-2
Massachusetts Institute of Technology
Schedule of Expenditures of Federal Awards - Lincoln Laboratory
By Sponsor & Contract - FY 2015

| Sponsor | Contract Number | Program Name | Total |
|---|------------------|--------------|------------------------------|
| <u>DEPARTMENT OF DEFENSE</u> | | | |
| AIR FORCE | FA8721-05-C-0002 | | \$ 247,924,902 |
| ARMY | FA8721-05-C-0002 | | 52,613,140 |
| CLASSIFIED | FA8721-05-C-0002 | | 145,054,450 |
| DEFENSE ADVANCED RESEARCH PROJECT AG | FA8721-05-C-0002 | | 49,540,876 |
| MISSILE DEFENSE AGENCY | FA8721-05-C-0002 | | 85,884,414 |
| NATIONAL SECURITY AGENCY | FA8721-05-C-0002 | | 10,704,720 |
| NAVY | FA8721-05-C-0002 | | 58,345,174 |
| OTHER DEPARTMENT OF DEFENSE | FA8721-05-C-0002 | | <u>160,554,960</u> |
| <i>TOTAL DEPARTMENT OF DEFENSE</i> | | | <u>\$ 810,622,636</u> |
| <u>NON-DEPARTMENT OF DEFENSE</u> | | | |
| DEPARTMENT OF ENERGY | FA8721-05-C-0002 | | \$ 528,054 |
| DEPARTMENT OF HEALTH AND HUMAN SERVICES | FA8721-05-C-0002 | | 24,255,189 |
| FEDERAL AVIATION AUTHORITY | FA8721-05-C-0002 | | 29,452,089 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | FA8721-05-C-0002 | | 14,718,028 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION | FA8721-05-C-0002 | | 5,390,924 |
| OTHER NON DOD | FA8721-05-C-0002 | | <u>1,203,864</u> |
| <i>TOTAL NON-DEPARTMENT OF DEFENSE</i> | | | <u>\$ 75,548,148</u> |
| Total Direct Awards | | | <u>\$ 886,170,784</u> |

Appendix A-2
Massachusetts Institute of Technology
Schedule of Expenditures of Federal Awards - Lincoln Laboratory
By Sponsor & Contract - FY 2015 Continued

| Prime Sponsor and Sponsor | sssthrough Program Numt | Program Name | Total |
|--|-------------------------|---|-----------------------|
| <u>Passthrough Awards</u> | | | |
| Department of Defense | | | |
| AIR FORCE | | | |
| University of Hawaii | FA9451-06-2-0338 | OTA Dev. & Device Processing | \$ 350,231 |
| ARMY | | | |
| QmagiQ Inc. | W909MY-13-C-0032 | VLWIR SLS-DFPA for Imaging Spectroscopy | 31,548 |
| | W911NF-14-P-0026 | Cryogenic Low-Noise Amplifiers | 38,178 |
| | W911SR-15-C-0001 | Rugged High Power Quantum Cascade Laser | 48,727 |
| MISSILE DEFENSE AGENCY | | | |
| QmagiQ Inc. | HQ0147-12-C-7188 | QmagiQ - DFPA | 117,133 |
| NAVY | | | |
| EOS Photonics | N68335-11-C-0431 | EOS Photonics | 87,562 |
| Freedom Photonics | N68335-13-C-0380 | Advanced EO Modulators | 55,584 |
| RDR Technology | N13A-T003 | Fire Scout Sense and Avoid | 17,751 |
| OFFICE OF NAVAL RESEARCH | | | |
| Out of the Fog Research LLC | N00014-09-C-0610 | Cryogenic RF Excision Phase II | 1,407 |
| Total Department of Defense | | | \$ 748,121 |
| DEPARTMENT OF ENERGY | | | |
| MIT | MIT-300075 | Infrared Nanocrystal Photonics | \$ 6,711 |
| Total Department of Energy | | | \$ 6,711 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | | | |
| NNX15AE40A | NNX15AE40A | Big Aviation Data Mining | \$ 116,157 |
| MIT | MIT-300080 | MiRa TA | 941,297 |
| MIT | MIT-300086 | | 42,341 |
| MIT | MIT-300087 | | 113,677 |
| Total National Aeronautics and Space Administration | | | \$ 1,213,473 |
| National Institute of Health | | | |
| | 1R41AG042218-01 | Vocal Biomarkers | \$ 14,803 |
| MIT | MIT-300076 | Microcludic MicroRNA Sensors | 180,141 |
| MIT | MIT-300079 | NIH Synthetic Biology Center | 266,426 |
| Total National Institute of Health | | | \$ 461,370 |
| NATIONAL SCIENCE FOUNDATION | | | |
| California Association for Research | AST-0132798 | Adv Adaptive Optics | \$ (59) |
| MIT | MIT-300071 | Nanoelectronics Beyond 2020 | 147,072 |
| MIT | MIT-300078 | Flexible Glucose Fuel Cell | 191,580 |
| Total National Science Foundation | | | \$ 338,594 |
| Total Passthrough Awards | | | \$ 2,768,269 |
| Total Federal Awards | | | \$ 888,939,053 |

Appendix A3
Massachusetts Institute of Technology
Federal Research Support - Passthrough - On Campus
FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|-----------------------------|--|--------|----------------|
| DEPARTMENT OF DEFENSE | | | | | |
| Brown University | | | | | |
| DEPARTMENT OF DEFENSE | 6920918 | 00000272 | Multi-Scale Fusion of Information for Uncertainty Quantification and Management in Large-Scale Simulations - BASE & OPTION | 12.800 | 203,695 |
| DEPARTMENT OF DEFENSE | 6926780 | 00000554 | Quantum Metaphotonics and Metamaterials: from Single Emitters to Strongly Correlated Systems | 12.800 | 234,081 |
| DEPARTMENT OF DEFENSE | 6931095 | 00000727 | A New Mathematical Framework for Design Under Uncertainty | 12.910 | 46,251 |
| Total for Brown University | | | | | 484,027 |
| University of California - Berkeley | | | | | |
| DEPARTMENT OF DEFENSE | 6929748 | 00008426 / W911NF-14-1-0078 | Realization of High Fidelity, On-Chip Readout of Solid State Quantum Bits | 12.431 | 213,251 |
| Total for University of California - Berkeley | | | | | 213,251 |
| American Lightweight Materials Manufacturing Innovation Institute | | | | | |
| DEPARTMENT OF DEFENSE | 6931266 | 0001 | Sub-Award Agreement 0001: Cross-Cut Pillar Lead - Cost Modeling v.2 | 12.CCC | 35,799 |
| Total for American Lightweight Materials Manufacturing Innovation Institute | | | | | 35,799 |
| University of California | | | | | |
| DEPARTMENT OF DEFENSE | 6929140 | 0145 G RA504 | Modeling and Analysis of Representations for Sensing-Action Systems | 12.910 | 43,142 |
| DEPARTMENT OF DEFENSE | 6927669 | 0157GQA206 | Tailoring the conformality and electronic property of thin films by atomic layer deposition | 12.300 | 112,680 |
| DEPARTMENT OF DEFENSE | 6930326 | 0190GSA047 | Sparse, fast real space methods for the partial differential equations arising in electronic materials design | 12.300 | 5,506 |
| DEPARTMENT OF DEFENSE | 6928413 | 1015GNA126 | Knowledge Representatoin, Reasoning and Learning for Understanding Scenes and Events | 12.300 | 541,558 |
| DEPARTMENT OF DEFENSE | 6927066 | KK9151 | Institute for Collaborative Biotechnology (ICB) | 12.431 | -27,964 |
| DEPARTMENT OF DEFENSE | 6919767 | KK9151-1 | Institute for Collaborative Biotechnology (ICB) | 12.431 | -36,341 |
| DEPARTMENT OF DEFENSE | 6926410 | KK9151-24 | Institute for Collaborative Biotechnology (ICB) | 12.431 | 334,255 |
| DEPARTMENT OF DEFENSE | 6929256 | KK9151-30 | Institute for Collaborative Biotechnology (ICB) | 12.431 | 29,738 |
| DEPARTMENT OF DEFENSE | 6929257 | KK9151-31 | Institute for Collaborative Biotechnology (ICB) | 12.431 | 516,935 |
| DEPARTMENT OF DEFENSE | 6929263 | KK9151-33 | Institute for Collaborative Biotechnology (ICB) | 12.431 | 402,433 |

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Massachusetts Institute of Technology
Federal Research Support - Passthrough - On Campus
FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|-------------------------|---|--------|------------------|
| DEPARTMENT OF DEFENSE | 6929264 | KK9151-34 | Institute for Collaborative Biotechnology (ICB) | 12.431 | 38,642 |
| DEPARTMENT OF DEFENSE | 6929265 | KK9151-35 | Institute for Collaborative Biotechnology (ICB) | 12.431 | 470,577 |
| DEPARTMENT OF DEFENSE | 6919782 | KK9151-7 | Institute for Collaborative Biotechnology (ICB) | 12.431 | -5 |
| Total for University of California | | | | | 2,431,154 |
| Columbia University | | | | | |
| DEPARTMENT OF DEFENSE | 6927546 | 1(GG007792) | Power Grid Vulnerability and Resilience to Geographically Correlated Failures | 12.351 | 102,429 |
| DEPARTMENT OF DEFENSE | 6926974 | 2 (GG008784) | Imaging How a Neuron Computes | 12.431 | -12,483 |
| Total for Columbia University | | | | | 89,946 |
| University of Utah | | | | | |
| DEPARTMENT OF DEFENSE | 6926864 | 10022273-MIT | Visualization of Discontinuous Galerkin Based High-Order Methods | 12.431 | 40,450 |
| Total for University of Utah | | | | | 40,450 |
| Rutgers University | | | | | |
| DEPARTMENT OF DEFENSE | 6917789 | 1043530/4-29429/10578 | AFIRM: Langer Nerve Project | 12.420 | -103 |
| DEPARTMENT OF DEFENSE | 6930216 | 5298 (W81XWH-14-1-0100) | A therapeutic system solution for optimal nerve repair | 12.42 | 431,959 |
| DEPARTMENT OF DEFENSE | 6931685 | 5562 | Dynamic Integration of Motion and Neural Data to Capture Human Behavior | 12.800 | 17,667 |
| Total for Rutgers University | | | | | 449,523 |
| Carnegie-Mellon University | | | | | |
| DEPARTMENT OF DEFENSE | 6923891 | 1130128-258552 | OmniTrans: An Omnivorous Framework for the Translation of Low Density Languages | 12.431 | 5,892 |
| DEPARTMENT OF DEFENSE | 6929741 | 1130171-323817 | OmniTrans: An Omnivorous Framework for the Translation of Low Density Languages | 12.431 | 20,945 |
| DEPARTMENT OF DEFENSE | 6921196 | 1141207-236214 | Decentralized Reasoning in Reduced Information Spaces | 12.300 | 91,813 |
| Total for Carnegie-Mellon University | | | | | 118,650 |
| HRL Laboratories, LLC | | | | | |
| DEPARTMENT OF DEFENSE | 6928024 | 12105-301702-DS | Unconventional Processing of Signals for Intelligent Data Exploitation (UPSIDE) | 12.CCC | 248,573 |
| Total for HRL Laboratories, LLC | | | | | 248,573 |
| Harvard University | | | | | |

Appendix A3
Massachusetts Institute of Technology
Federal Research Support - Passthrough - On Campus
FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|---|--|--------|----------------|
| DEPARTMENT OF DEFENSE | 6930108 | 123572-5083830 | Bio-Inspired Optics: Offering Physical and Technological Insights in Color and Structure (BIOOPTICS) | 12.800 | 65,000 |
| DEPARTMENT OF DEFENSE | 6925058 | 133534-5044541 | Development of a Diamond Nanoscale Magnetometer Using Quantum-Assisted Sensing and Readout | 12.CCC | 19,046 |
| DEPARTMENT OF DEFENSE | 6930031 | 133668-5079809 | Measuring, Understanding, and Responding to Covert Social Networks: Passive and Active Tomography | 12.431 | 77,925 |
| DEPARTMENT OF DEFENSE | 6931186 | FUND# 123753 | Letter Agreement: Oren Rippe | 12.91 | 62,374 |
| University of Southern California | | | | | 224,344 |
| DEPARTMENT OF DEFENSE | 6920416 | 137760 | Intelligent Coordination and Adaptive Classification for Naval Autonomous Systems | 12.300 | 50,647 |
| DEPARTMENT OF DEFENSE | 6920504 | 138802, P.O.#10058889 | ANTIDOTE: Adaptive Networks for Threat and Intrusion Detection or Termination | 12.300 | 12,657 |
| Duke University | | | | | 63,304 |
| DEPARTMENT OF DEFENSE | 6927752 | 13-DARPA-1075 (PRIME AWD NO = W911NF-13-1-0096) | Stochastic computing machines enabled by DNA self-assembly | 12.341 | 41,435 |
| DEPARTMENT OF DEFENSE | 6928294 | 13-ONR-1109 | Expanding the Limits of Acoustic Metamaterials | 12.300 | 338,223 |
| Universal Technology Corporation | | | | | 379,657 |
| DEPARTMENT OF DEFENSE | 6928376 | 13-S7403-02-C2 | Self-Curing Nano-Engineered Laminates | 12.CCC | 16,372 |
| DEPARTMENT OF DEFENSE | 6931147 | 15-S2605-04-C32 | Adaptive Flight Control for Hypersonic Vehicles | 12.CCC | 50,930 |
| Clemson University | | | | | 67,303 |
| DEPARTMENT OF DEFENSE | 6923393 | 1501-203-2008185 | Gradient Films from Shape Memory Nanofoams for Waveguide Coating | 12.351 | 124,938 |
| Scientific Systems Company, Incorporated | | | | | 124,938 |
| DEPARTMENT OF DEFENSE | 6926767 | 1570-MIT-SSCI | Automated Bayesian CrossCat (ABC) Family of Machine Learning Systems for XDATA | 12.CCC | 171,524 |
| CFD Research Corporation | | | | | 171,524 |

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Massachusetts Institute of Technology
Federal Research Support - Passthrough - On Campus
FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|---|--|--------|----------------|
| DEPARTMENT OF DEFENSE | 6926484 | 20120074 | Design of Acoustic Metamaterials for Passive Hearing Protector | 12.CCC | 65,477 |
| DEPARTMENT OF DEFENSE | 6930870 | CFDRC PROJECT 9148 | An Integrated Field-deployable Nanofluidic Sequencing Platform for Polypeptides | 12.CCC | 29,970 |
| Total for CFD Research Corporation | | | | | 95,447 |
| Advanced Technology International dba SCRA | | | | | |
| DEPARTMENT OF DEFENSE | 6926813 | 2013-432 | Innovation Economy: Base Task Order Agreement. | 12.CCC | 89,608 |
| DEPARTMENT OF DEFENSE | 6931548 | TASK ORDER 01: BASE TO AGREEMENT 2015-461 | Base Task Order Agreement. | 12.CCC | 91,917 |
| Total for Advanced Technology International dba SCRA | | | | | 181,525 |
| SYSTEMS & TECHNOLOGY RESEARCH LLC | | | | | |
| DEPARTMENT OF DEFENSE | 6929040 | 2014-1036 | STTR - Forecasting Dynamic Group Behavior in Social Media - Phase II | 12.CCC | 83,387 |
| Total for SYSTEMS & TECHNOLOGY RESEARCH LLC | | | | | 83,387 |
| Massachusetts General Hospital | | | | | |
| DEPARTMENT OF DEFENSE | 6928220 | 221647 | A Randomized, Controlled Trial of Intranasal Oxytocin as an Adjunct to Behavioral Therapy for Autism Spectrum Disorder | 12.420 | 14,636 |
| DEPARTMENT OF DEFENSE | 6927871 | 222252 | (ADVANCE) Rapid Immunity via Gene Transfer of Oligoclonal Fc-Enhanced mAbs | 12.910 | 489,216 |
| DEPARTMENT OF DEFENSE | 6932072 | MGH/FA9550-13-1-0068 | Letter of Agreement - Meena Siddiqui | 12.800 | 3,333 |
| DEPARTMENT OF DEFENSE | 6925188 | SUBAWARD #219877 | A Portable Distributed X-ray Source for Phase Contrast Imaging | 12.910 | 193,066 |
| DEPARTMENT OF DEFENSE | 6924987 | W81XWH-09-2-0001-218193 | MIT-CIMIT-A Label-Free Viral Detection Microchip - Year 2 | 12.420 | 55,842 |
| Total for Massachusetts General Hospital | | | | | 756,092 |
| Center for Integration of Medicine & Innovative Technology | | | | | |
| DEPARTMENT OF DEFENSE | 6930832 | 225479 | 2014 - 2015: MIT-CIMIT Precision Medical Devices Design Course | 12.420 | 68,721 |
| Total for Center for Integration of Medicine & Innovative Technology | | | | | 68,721 |
| Stanford University | | | | | |
| DEPARTMENT OF DEFENSE | 6922501 | 25081590-44868-B | MURI: Robust and Complex On-Chip Nanophotonics | 12.800 | 102,288 |
| DEPARTMENT OF DEFENSE | 6924341 | 27834090-50339-A | Securing end hosts through Decentralized Information Flow-Control | 12.910 | 39,094 |
| DEPARTMENT OF DEFENSE | 6930661 | 60705345-111668 | Amortized Inference for Probabilistic Programs | 12.300 | 69,312 |

Appendix A3
Massachusetts Institute of Technology
Federal Research Support - Passthrough - On Campus
FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|-------------------------------|----------------|--|--|--------|------------------|
| DEPARTMENT OF DEFENSE | 6931094 | 60744752-3551877 | Role of Bidirectional Computation in Visual Scene Analysis | 12.300 | 118,430 |
| Vanderbilt University | | | Total for Stanford University | | 329,124 |
| DEPARTMENT OF DEFENSE | 6930785 | 2784-018400 | Science of Secure and Resilient Cyber-Physical Systems | 12.300 | 112,169 |
| University of Michigan | | | Total for Vanderbilt University | | 112,169 |
| DEPARTMENT OF DEFENSE | 6924558 | 3002085646 | Michigan/AFRL Collaborative Center in Control Sciences (MAX) | 12.800 | 38,594 |
| DEPARTMENT OF DEFENSE | 6928556 | 3002453814 | PASSIVE AND ACTIVE FRICTION DRAG REDUCTION OF TURBULENT FLOWS OVER SUPER-HYDROPHOBIC SURFACES | 12.300 | 136,240 |
| DEPARTMENT OF DEFENSE | 6932103 | 3002565045 | The Center for Future Architectures Research (C-FAR) | 12.CCC | 209,278 |
| DEPARTMENT OF DEFENSE | 6929042 | 3002883704 | NEEC: Flow Structure Interaction: Dam Break Wave Impinging on Flexible Plate | 12.CCC | 28,402 |
| DEPARTMENT OF DEFENSE | 6929043 | 3002883706 | NEEC: Quantification of extreme events in ocean waves | 12.CCC | 7,149 |
| DEPARTMENT OF DEFENSE | 6929669 | 3003000672 | Supervised Teleautonomy for Agile Mobility and Dexterous Manipulation | 12.CCC | 71,113 |
| DEPARTMENT OF DEFENSE | 6931058 | 3003267787 | Flow structure interaction: dam break wave impinging on flexible plate | 12.CCC | 73,381 |
| DEPARTMENT OF DEFENSE | 6931059 | 3003267790 | Supervised Teleautonomy for Agile Mobility and Dexterous Manipulation | 12.CCC | 46,085 |
| DEPARTMENT OF DEFENSE | 6931069 | 3003268775 | Quantification for Extreme Events in Ocean Waves | 12.CCC | 131,821 |
| DEPARTMENT OF DEFENSE | 6931497 | 3003383551 | Supplemental Funds To MIT Flow structure interaction: dam break wave impinging on flexible plate | 12.300 | 8,580 |
| DEPARTMENT OF DEFENSE | 6930296 | SUBAWARD NO. 3003093530 UNDER PRIME NO. FA9550-11-1-0089 | Morphing Carbon Nanotube Microstructures | 12.800 | 39,000 |
| DEPARTMENT OF DEFENSE | 6917323 | SUBCONTRACT #3000913650 | Michigan/AFRL Collaborative Center for Control Sciences (MACCCS) | 12.800 | 81,796 |
| DEPARTMENT OF DEFENSE | 6924976 | SUBCONTRACT 3001996313 | Value-centered Information Theory for Adaptive Learning, Interference, Tracking, and Exploitation (VITALITE) | 12.431 | 418,004 |
| University of Delaware | | | Total for University of Michigan | | 1,289,442 |

**Appendix A3
Massachusetts Institute of Technology
Federal Research Support - Passthrough - On Campus
FY 2015 Expenditures by Prime Sponsor and Sponsor**

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|-----------------------------|--|--------|------------------|
| DEPARTMENT OF DEFENSE | 6929807 | 36196 | Architecture and Planning Programming Models for High Performance Interactive Computation | 12.800 | 160,170 |
| University of California-San Diego | | | | | |
| DEPARTMENT OF DEFENSE | 6927945 | 39244040 | Porous Si-based Therapeutic Nanoplatfoms | 12.910 | 508,784 |
| DEPARTMENT OF DEFENSE | 6928757 | PO #S9000381, SUB #43019208 | The Information Content of Ocean Noise: Theory and Experiment - Imaging the Changing Arctic with Ice Noise | 12.300 | 196,635 |
| Total for University of Delaware | | | | | |
| | | | | | 160,170 |
| University of New Mexico | | | | | |
| DEPARTMENT OF DEFENSE | 6925887 | 433396-875J | MEMS Based Millimeter-Scale Advanced Thermophotovoltaic Power System with Ultra-High Density | 12.CCC | 41,114 |
| DEPARTMENT OF DEFENSE | 6926768 | SUBCONTRACT: 271387-875J | (MURI) Innovative use of Metamaterials in Confining, Controlling, and Radiating Intense Microwave Pulses | 12.800 | 586,632 |
| Total for University of California-San Diego | | | | | |
| | | | | | 705,419 |
| Pennsylvania State University | | | | | |
| DEPARTMENT OF DEFENSE | 6924378 | 4463-MIT-AFOSR-0192 | Unconventional High Density Vertically Aligned Conducting Polymer/Carbon Nanotube Composites for Ultrahigh Energy Density and Power Density Energy Storage Devices | 12.800 | 19,972 |
| Total for University of New Mexico | | | | | |
| | | | | | 627,746 |
| Boston University | | | | | |
| DEPARTMENT OF DEFENSE | 6924738 | 4500000552 | MURI: Utilizing Synthetic Biology to Create Programmable Micro-Bio-Robots | 12.300 | 695,347 |
| DEPARTMENT OF DEFENSE | 6924758 | 4500000571 | Synthetic Mammalian Gene Regulatory Circuits for in Vivo Biomedical Applications | 12.431 | 123,867 |
| DEPARTMENT OF DEFENSE | 6923208 | 450000228 | MURI: Topic #2 Adaptive Cognitive maps for Autonomous Systems Project Title: Grid Cells and Cognitive maps for Autonomous Systems | 12.300 | 558,424 |
| Total for Boston University | | | | | |
| | | | | | 1,377,638 |
| Boston University Medical Campus | | | | | |
| DEPARTMENT OF DEFENSE | 6931794 | 4500001684 | A Tool for Determining the Number of Contributors: Interpreting Complex, Compromised, Low-Template DNA | 12.CCC | 27,776 |
| Total for Boston University Medical Campus | | | | | |
| | | | | | 27,776 |

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FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|-------------------------------|---|--------|----------------|
| International Business Machine | | | | | |
| DEPARTMENT OF DEFENSE | 6929745 | 4913900052 | MAGANIMOS: Integrated Magnetic, GaN, and SOI CMOS for Power conversion and RF power amplification | 12.CCC | 305,556 |
| DEPARTMENT OF DEFENSE | 6925544 | AGREEMENT NUMBER 4911028171.0 | Broad Operational Language Translation (BOLT): Activity C | 12.CCC | 113,787 |
| Total for International Business Machine | | | | | 419,342 |
| The Broad Institute, Inc. | | | | | |
| DEPARTMENT OF DEFENSE | 6926927 | 5050030-55000000527 | MIT-Broad Center for High-Throughput Synthetic Biology | 12.91 | 220,124 |
| Total for The Broad Institute, Inc. | | | | | 220,124 |
| University of Pennsylvania | | | | | |
| DEPARTMENT OF DEFENSE | 6927251 | 559932 | New Paradigms for Scalable Online Decentralized Optimization | 12.300 | 146,470 |
| DEPARTMENT OF DEFENSE | 6927407 | 560102 | Evolution of Cultural Norms and Dynamics of Socio Political Change | 12.431 | 387,903 |
| Total for University of Pennsylvania | | | | | 534,374 |
| The Ohio State University Foundation | | | | | |
| DEPARTMENT OF DEFENSE | 6918097 | 60014918 | Stochastic Control of Multi-Scale Networks Modeling Analysis and Algorithms | 12.431 | 1,011 |
| Total for The Ohio State University Foundation | | | | | 1,011 |
| Ohio State University | | | | | |
| DEPARTMENT OF DEFENSE | 6931042 | 60040869 | Modeling, Analysis and Control for Robust Interdependent Networks | 12.351 | 18,639 |
| DEPARTMENT OF DEFENSE | 6923049 | RF01224242 | Cryogenic Peltier Cooling | 12.800 | 264,453 |
| DEPARTMENT OF DEFENSE | 6922491 | SUB 60028687 PO RF01224242 | Cryogenic Peltier Cooling | 12.800 | 163,488 |
| Total for Ohio State University | | | | | 446,580 |
| Lincoln Laboratory | | | | | |
| DEPARTMENT OF DEFENSE | 6920775 | 7000087748 | Reliable Networking on Unreliable Substrates under Severe Stress | 12.CCC | 84,238 |
| DEPARTMENT OF DEFENSE | 6923506 | 7000126525 | Small Deployable UAV Systems | 12.CCC | 371 |
| DEPARTMENT OF DEFENSE | 6923385 | 7000139390 | High Power-Per-Weight Organic Solar Cell | 12.CCC | 61,803 |
| DEPARTMENT OF DEFENSE | 6923783 | 7000151056 | Designing Optimal Clinical Trials for Cancer | 12.CCC | 74,599 |
| DEPARTMENT OF DEFENSE | 6924995 | 7000174664 | Phase II: Demonstration of Reduced Surface Congestion through Pushback Rate Control | 12.CCC | 123,504 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|-----------------------|----------------|--------------------|---|--------|-------------|
| DEPARTMENT OF DEFENSE | 6926027 | 7000200659 | Repeatable Large Systems Cyber Impact Analysis (Program 2112-273) | 12.CCC | 19,732 |
| DEPARTMENT OF DEFENSE | 6926591 | 7000211420 | Connectivity Analysis: Latent Structure and Anomaly Detection in Graphs | 12.CCC | 71,582 |
| DEPARTMENT OF DEFENSE | 6927127 | 7000221325 | High-Fidelity Dispersive Readout and Noise Characterization of Superconducting Qubits | 12.CCC | 153,967 |
| DEPARTMENT OF DEFENSE | 6927414 | 7000224798 | Modular UAV Demonstration Program | 12.CCC | 4,720 |
| DEPARTMENT OF DEFENSE | 6928379 | 7000241837 | High-fidelity Amplification and Readout of Long-Lived Superconducting Qubits | 12.CCC | 126,609 |
| DEPARTMENT OF DEFENSE | 6928933 | 7000243692 | Innovation in Unmanned Air Vehicle Development | 12.CCC | 86,207 |
| DEPARTMENT OF DEFENSE | 6928349 | 7000246213 | Graphene-ALM Heterostructures for Infrared Photodetection | 12.CCC | 45,196 |
| DEPARTMENT OF DEFENSE | 6928727 | 7000249226 | Next Generation Environmental Monitoring | 12.CCC | 450 |
| DEPARTMENT OF DEFENSE | 6928730 | 7000251539 | A Platform for Multi-Material Fabrication | 12.CCC | -2,165 |
| DEPARTMENT OF DEFENSE | 6928924 | 7000254121 | Study of JCIDS Semantic Architecture Framework | 12.CCC | 154,588 |
| DEPARTMENT OF DEFENSE | 6928790 | 7000254279 | Code Randomization Technique | 12.CCC | 73,440 |
| DEPARTMENT OF DEFENSE | 6931470 | 7000259332 | Design, Fabrication, & Testing of An Aluminum-Seawater Reaction Engine for Autonomous Undersea Vehicles | 12.CCC | 187,548 |
| DEPARTMENT OF DEFENSE | 6929033 | 7000259333 | Campus/Lincoln Photonics Initiative | 12.CCC | 97,074 |
| DEPARTMENT OF DEFENSE | 6929147 | 7000260737 | MIT Campus / Lincoln Laboratory Integrated Quantum Initiative | 12.CCC | 96,040 |
| DEPARTMENT OF DEFENSE | 6930026 | 7000276328 | Ultra-Low Intensity Nonlinear Optics Using Graphene Plasmons | 12.CCC | 126,001 |
| DEPARTMENT OF DEFENSE | 6930859 | 7000290592 | Coherent Spin Qubits for Quantum-Enhanced Optimization | 12.CCC | 414,921 |
| DEPARTMENT OF DEFENSE | 6930899 | 7000290834 | Photon-Efficient 3D Laser Radar | 12.CCC | 99,624 |
| DEPARTMENT OF DEFENSE | 6930986 | 7000291604 | Study of JCIDS Semantic Architecture Framework | 12.CCC | 44,179 |
| DEPARTMENT OF DEFENSE | 6931035 | 7000293260 | Secure Communications via Quantum Illumination | 12.CCC | 26,609 |
| DEPARTMENT OF DEFENSE | 6931068 | 7000294429 | Proposal for A Low-Torque Pan Tilt System for Directional Scanning in a Marine Environment | 12.CCC | 19,476 |
| DEPARTMENT OF DEFENSE | 6931296 | 7000299412 | A Facile and Versatile Method to Produce High Surface Area, Low Density Functional Materials | 12.CCC | 80,179 |
| DEPARTMENT OF DEFENSE | 6931371 | 7000300182 | MIT Campus Contributions to Microladar Line-Funded Project | 12.CCC | 120,044 |
| DEPARTMENT OF DEFENSE | 6931550 | 7000304584 | Electroquasistatic Imaging of 3D Doping Profiles | 12.CCC | 14,412 |
| DEPARTMENT OF DEFENSE | 6931691 | 7000308296 | LILYPADS/PUPS | 12.CCC | 10,736 |
| DEPARTMENT OF DEFENSE | 6930091 | 77000276714 | Seedlaser for a cryogenic Yb: YLF laser | 12.CCC | 49,545 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|-----------------------|----------------|--------------------|---|--------|-------------|
| DEPARTMENT OF DEFENSE | 6931362 | PO 7000300034 | Robust Transportation Models and Algorithms for USTRANSCOM | 12.CCC | 42,941 |
| DEPARTMENT OF DEFENSE | 6925434 | PO #7000184872 | Support of the Radio Communication Link Project Using the Westford Radio Telescope | 12.CCC | 357,258 |
| DEPARTMENT OF DEFENSE | 6926167 | PO #7000201843 | Computational Imaging and Compressive Sensing for Phase Retrieval | 12.CCC | 23,063 |
| DEPARTMENT OF DEFENSE | 6928919 | PO #7000255441 | MIT Haystack Observatory Engineering Support for the Lincoln Space Surveillance Complex (LSSC) | 12.CCC | 561,264 |
| DEPARTMENT OF DEFENSE | 6929540 | PO #7000267637 | Support of the LAKATT Program 370 Using the Westford Radio Telescope | 12.CCC | 93,159 |
| DEPARTMENT OF DEFENSE | 6930955 | PO #7000289543 | MIT Haystack Observatory Engineering Support for the Lincoln Space Surveillance Complex (LSSC) | 12.CCC | 1,446,396 |
| DEPARTMENT OF DEFENSE | 6931301 | PO #7000299111 | Autonomy for Autonomous Undersea Vehicles – Surface Ship Engagement | 12.CCC | 122,543 |
| DEPARTMENT OF DEFENSE | 6919750 | PO 7000074667 | Variability Compensation Techniques for Speaker and Language Recognition | 12.CCC | 193,457 |
| DEPARTMENT OF DEFENSE | 6923693 | PO 7000147774 | Development of a Microfluidic Gene Assembler (MGA) | 12.CCC | -116 |
| DEPARTMENT OF DEFENSE | 6925546 | PO 7000180248 | MicroMas | 12.CCC | 5,709 |
| DEPARTMENT OF DEFENSE | 6926248 | PO 7000180267 | Human-Machine Team Planning | 12.CCC | 1,550 |
| DEPARTMENT OF DEFENSE | 6925198 | PO 7000180623 | Computational Modeling Collaboration | 12.CCC | 1,085 |
| DEPARTMENT OF DEFENSE | 6925780 | PO 7000194800 | Campus/Lincoln Photonics Initiative | 12.CCC | -1,992 |
| DEPARTMENT OF DEFENSE | 6926437 | PO 7000206296 | Earth-Abundant Photovoltaic Device Utilizing Spectrally Matched Diffractive Optics | 12.CCC | -430 |
| DEPARTMENT OF DEFENSE | 6926600 | PO 7000210670 | ACC Funding for Self-Assembling, Alternating Nanochannels and Nanowires Lined with Carbene-Based Chemical and Biological Recognition Moieties via Multi-Block Bottle-Brush Polymer (MBBP) Self-Assembly | 12.CCC | -11,537 |
| DEPARTMENT OF DEFENSE | 6927084 | PO 7000219234 | Magnetically Suspended Reaction Sphere (MSRS) | 12.CCC | 220 |
| DEPARTMENT OF DEFENSE | 6927705 | PO 7000234714 | Silicon Photonics Integration | 12.CCC | -2,444 |
| DEPARTMENT OF DEFENSE | 6928241 | PO 7000238989 | Concentrated Solar Thermoacoustic Engine for Satellite Power Generation | 12.CCC | 53,867 |
| DEPARTMENT OF DEFENSE | 6929045 | PO 7000255976 | New Directions in Computational Imaging | 12.CCC | 78,770 |
| DEPARTMENT OF DEFENSE | 6929066 | PO 7000259926 | Graduate Student Research in FY14 in support of Data-driven Autonomy for Group Operations in Uncertain Scenarios | 12.CCC | 154,100 |
| DEPARTMENT OF DEFENSE | 6929211 | PO 7000260739 | Integrated WDM Lasercomm Transceivers | 12.CCC | 141,190 |
| DEPARTMENT OF DEFENSE | 6929742 | PO 7000260950 | USTC Living Plan FFY14 | 12.CCC | 121,493 |
| DEPARTMENT OF DEFENSE | 6929207 | PO 7000260956 | RF Signal Acquisition and Compression using the Sparse FFT | 12.CCC | 92,961 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|-----------------------|----------------|------------------------------------|---|--------|-------------|
| DEPARTMENT OF DEFENSE | 6929208 | PO 7000261350 | Low Power Embedded Analytics | 12.CCC | 229,893 |
| DEPARTMENT OF DEFENSE | 6929209 | PO 7000261954 | LL/MIT Research Collaboration on Functional Encryption | 12.CCC | 67,865 |
| DEPARTMENT OF DEFENSE | 6929210 | PO 7000261956 | LL/MIT Research Collaboration on Trusted and Secure Computing | 12.CCC | 5,233 |
| DEPARTMENT OF DEFENSE | 6929506 | PO 7000264837 | Methods for Robust Automatic Speech Recognition from Video using Visual Grounding | 12.CCC | 44,715 |
| DEPARTMENT OF DEFENSE | 6929629 | PO 7000264958 | Earth-Abundant Photovoltaic Device Utilizing Spectrally Matched Diffractive Optics | 12.CCC | 24,931 |
| DEPARTMENT OF DEFENSE | 6931048 | PO 7000270451 | Robust Communication and Navigation for Unmanned UAVs | 12.CCC | 138,374 |
| DEPARTMENT OF DEFENSE | 6929634 | PO 7000271094 | Julia Improvements for XDATA | 12.CCC | 147,657 |
| DEPARTMENT OF DEFENSE | 6930049 | PO 7000277003 | Decentralized Multi-Agent Cooperation with Macro-Actions | 12.CCC | 23,821 |
| DEPARTMENT OF DEFENSE | 6931021 | PO 7000280509 | Threat Resilient Multi-Agent Communication Networks | 12.CCC | 73,220 |
| DEPARTMENT OF DEFENSE | 6930319 | PO 7000282375 | Engineered synthetic gene circuits in Lactobacillus for autonomous in vivo sensing of blood | 12.CCC | 131,336 |
| DEPARTMENT OF DEFENSE | 6930317 | PO 7000282490 | A New Bottom-up 3D Printing Strategy: Photo-growth of Magic Sheets | 12.CCC | 73,297 |
| DEPARTMENT OF DEFENSE | 6930659 | PO 7000286794/ LETTER 16-S-14-0235 | ERS Tradespace Exploration | 12.CCC | 329,197 |
| DEPARTMENT OF DEFENSE | 6930671 | PO 7000287371 | ACC Funding for Bistable Thin Films with Dynamic Magnetic or Conductive Layouts | 12.CCC | 67,433 |
| DEPARTMENT OF DEFENSE | 6930854 | PO 7000290327 | DARPA Squad-X Super Seeding | 12.CCC | 54,948 |
| DEPARTMENT OF DEFENSE | 6930851 | PO 7000290410 | Transparent displays enabled by wavelength-selective light scattering | 12.CCC | 54,116 |
| DEPARTMENT OF DEFENSE | 6930876 | PO 7000290426 | Fluorinated Coatings for High Performance Electrodes | 12.CCC | 41,144 |
| DEPARTMENT OF DEFENSE | 6930855 | PO 7000290454 | Research on Advanced Algorithms for Speaker & Language Recognition | 12.CCC | 70,850 |
| DEPARTMENT OF DEFENSE | 6930872 | PO 7000290627 | Robust Subspace Methods for Speaker and Language Recognition | 12.CCC | 147,179 |
| DEPARTMENT OF DEFENSE | 6931101 | PO 7000294843 | Coordinated Nanosatellite Imaging and Communications Systems | 12.CCC | 60,920 |
| DEPARTMENT OF DEFENSE | 6931130 | PO 7000295944 | Integrated WDM Lasercomm Transceivers | 12.CCC | 77,532 |
| DEPARTMENT OF DEFENSE | 6931172 | PO 7000297585 | Conceive, Design, Fabrication, and Testing of Portable 2.5kW Power System | 12.CCC | 197,618 |
| DEPARTMENT OF DEFENSE | 6931169 | PO 7000297666 | Engineering Novel Genetic Codes in Bacteria | 12.CCC | 20,680 |
| DEPARTMENT OF DEFENSE | 6931521 | PO 7000304326 | Functional Connectivity Analysis in Learning | 12.CCC | 26,725 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|--------------------|--|--------|------------------|
| DEPARTMENT OF DEFENSE | 6931695 | PO 7000308473 | Student Based Development of a Small-UAV Marine Surveillance System with a Semisubmersible Resupply Network | 12.CCC | 6,341 |
| DEPARTMENT OF DEFENSE | 6931811 | PO 7000311358 | Reconfigurable Virtual Phononic Crystals in AlGaIn/GaN | 12.CCC | 17,936 |
| DEPARTMENT OF DEFENSE | 6930871 | PO NO. 7000290755 | High-Speed Photoprinting of Digital Solids | 12.CCC | 42,317 |
| DEPARTMENT OF DEFENSE | 6928672 | PO7000251523 | Electrically Driven Digital Printing of Particulate Matter | 12.CCC | 13,636 |
| Total for Lincoln Laboratory | | | | | 8,128,650 |
| BAE Systems Info & Electronic Systems Integration, Inc | | | | | |
| DEPARTMENT OF DEFENSE | 6923121 | 739532-SLIN 0001 | Service-Oriented Netcoded Architecture for Tactical Anonymity (SONATA) | 12.CCC | -575 |
| DEPARTMENT OF DEFENSE | 6928927 | 739532-SLIN 0004 | Service-Oriented Netcoded Architecture for Tactical Anonymity (SONATA) | 12.CCC | 29,685 |
| DEPARTMENT OF DEFENSE | 6924057 | 741274 | Coverage by Teams of Autonomous Ground and Aerial Vehicles | 12.CCC | 123,404 |
| DEPARTMENT OF DEFENSE | 6931694 | 892730 | Ultra-high energy density TPV generator for small robotic platforms: First ever demonstration of fuel powered robot with extreme range | 12.CCC | 20,016 |
| Total for BAE Systems Info & Electronic Systems Integration, Inc | | | | | 172,530 |
| BAE Systems, PLC | | | | | |
| DEPARTMENT OF DEFENSE | 6928213 | 842801 | GLIDES: Generalized Learning & Inferencing for Distributed Environments & Sources | 12.CCC | 106,343 |
| Total for BAE Systems, PLC | | | | | 106,343 |
| University of Minnesota | | | | | |
| DEPARTMENT OF DEFENSE | 6920941 | A000649301 | Towards a Theory for Network Robustness and Inter-Dependence under Attacks | 12.351 | 60,990 |
| Total for University of Minnesota | | | | | 60,990 |
| Woods Hole Oceanographic Institution | | | | | |
| DEPARTMENT OF DEFENSE | 6924544 | A 100847 | Unified Four-dimensional Multi-resolution Oceanographic, Acoustic and Atmospheric Modeling and Dynamics | 12.300 | 362,247 |
| DEPARTMENT OF DEFENSE | 6929292 | A 101085 | Impacts of Changing Climate on Pacific Island-based Defense Installations | 12.CCC | 11,477 |
| Total for Woods Hole Oceanographic Institution | | | | | 373,724 |
| Rensselaer Polytechnic Institute | | | | | |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|-------------------------------------|--|--------|-------------|
| DEPARTMENT OF DEFENSE | 6921314 | A71357 | Social and Cognitive Networks Academic Research Center | 12.630 | 64,795 |
| Aurora Flight Sciences Corporation | | | | | |
| DEPARTMENT OF DEFENSE | 6925161 | AFS11-1225 | Autonomous Landing at Unprepared Site for a Cargo Unmanned Air Systems | 12.CCC | 29,977 |
| DEPARTMENT OF DEFENSE | 6925499 | AFS12-0207 | Distributed Satellite Systems | 12.CCC | 77,236 |
| DEPARTMENT OF DEFENSE | 6925498 | AFS12-0208 | Cubesat electrospray thruster assembly | 12.CCC | 18,704 |
| DEPARTMENT OF DEFENSE | 6929853 | SBIR SUBCONTRACT AGRMNT DTD 2/24/14 | Phase 1: Virtual Verification Test Bed | 12.CCC | 36,786 |
| Total for Aurora Flight Sciences Corporation 162,703 | | | | | |
| The Fab Foundation | | | | | |
| DEPARTMENT OF DEFENSE | 6931452 | AGMT DATED 10/1/14 | Distributed Technical Education: Bringing the campus to the student. | 12.431 | 203,144 |
| Total for The Fab Foundation 203,144 | | | | | |
| Photon Spot, Inc. | | | | | |
| DEPARTMENT OF DEFENSE | 6930356 | AGMT DATED 7/18/14 UNDER D14PC00117 | SBIR: High Efficiency Superconducting Nanowire Single-Photon Detectors | 12.CCC | 17,550 |
| Total for Photon Spot, Inc. 17,550 | | | | | |
| Cambridge Electronics, Inc | | | | | |
| DEPARTMENT OF DEFENSE | 6929068 | AGMT DTD 11/5/13 | Gallium Nitride (GaN)-based High Efficiency Switch/Transistor for L-band RF Power Amplifier Applications | 12.CCC | 14,428 |
| Total for Cambridge Electronics, Inc 14,428 | | | | | |
| Vector Controls, Inc. | | | | | |
| DEPARTMENT OF DEFENSE | 6928000 | AGMT DTD 7/23/13 | STTR: N10A-T036 (Phase II) Mitigation of USV Motions via Wave Sensing and Predictions | 12.CCC | 33,579 |
| Total for Vector Controls, Inc. 33,579 | | | | | |
| Mide Technology | | | | | |
| DEPARTMENT OF DEFENSE | 6928468 | AGMT. DTD. 7/1/13 | Phase I: Low Weight Atmospheric Diving Suit | 12.CCC | 21,168 |
| DEPARTMENT OF DEFENSE | 6931299 | AGRMNT EFFECTIVE 12/16/2014 | STTR Phase II: Light Weight Atmospheric Diving Suit | 12.CCC | 65,162 |
| Total for Mide Technology 86,330 | | | | | |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|---------------------------|---|--------|----------------|
| Luna Innovations, Inc. | | | | | |
| DEPARTMENT OF DEFENSE | 6931082 | AGMT. DTD. 9/1/14 | Durable Low Adhesion Anti-Icing and Ice-Phobic Surfaces | 12.CCC | 27,000 |
| | | | Total for Luna Innovations, Inc. | | 27,000 |
| Orbital Research, Incorporated | | | | | |
| DEPARTMENT OF DEFENSE | 6928440 | AGMT. DTD. 9/13/13 | Hypoxia Monitoring Prediction and Alert System | 12.CCC | 10,540 |
| | | | Total for Orbital Research, Incorporated | | 10,540 |
| Securborator | | | | | |
| DEPARTMENT OF DEFENSE | 6929632 | AGREEMENT DATED 1/31/2014 | Augmented Reality for Tactical Edge Analysis (ARTEA) system | 12.CCC | 5,509 |
| | | | Total for Securborator | | 5,509 |
| Boston Dynamics, Incorporated | | | | | |
| DEPARTMENT OF DEFENSE | 6931696 | AGREEMENT DATED 11/1/14 | Perception, Planning and Control for Cheetah | 12.CCC | 513,498 |
| | | | Total for Boston Dynamics, Incorporated | | 513,498 |
| TIPD, LLC | | | | | |
| DEPARTMENT OF DEFENSE | 6930803 | AGREEMENT DATED 7/31/14 | Holographic Video Display Using Novel Guided-wave Scanning System (HVD-GWSS) - SBIR Phase II | 12.CCC | 66,327 |
| | | | Total for TIPD, LLC | | 66,327 |
| Stevens Institute of Technology | | | | | |
| DEPARTMENT OF DEFENSE | 6929135 | AGREEMENT DATED 9/27/13 | (SERC) Collaboration Agreement: Systems Engineering Research Center | 12.CCC | 48,153 |
| DEPARTMENT OF DEFENSE | 6930096 | HQ0034-13-D004 | (SERC) Collaboration Agreement: Systems Engineering Research Center | 12.CCC | 391,465 |
| DEPARTMENT OF DEFENSE | 6931282 | HQ0034-13-D004/ TO #037 | (SERC) Collaboration Agreement: Systems Engineering Research Center | 12.CCC | 19,569 |
| DEPARTMENT OF DEFENSE | 6931637 | HQ0034-13-D004/TO #043 | (SERC) Collaboration Agreement: Systems Engineering Research Center | 12.CCC | 28,478 |
| DEPARTMENT OF DEFENSE | 6928762 | SUBCONTRACT 20131113 | RT-52 Engineered Resilient Systems (ERS) – Systems Engineering (SE): Knowledge Capture and Transfer | 12.CCC | 19,387 |
| | | | Total for Stevens Institute of Technology | | 507,051 |
| Perfuzia Medical, Inc. | | | | | |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|--|--|--------|----------------|
| DEPARTMENT OF DEFENSE | 6934191 | AGRMT DTD 2/17/15 | Development of novel wound dressing technology combining advanced hydrogel and perfusion enhancement technologies | 12.CCC | 11,784 |
| Ginkgo BioWorks, Inc. | | | Total for Perfuzia Medical, Inc. | | 11,784 |
| DEPARTMENT OF DEFENSE | 6926117 | AGRMT DTD 2/9/2012 | Environment dependent copy protection of engineered organisms | 12.910 | 4,100 |
| Applied Physical Sciences Corp. | | | Total for Ginkgo BioWorks, Inc. | | 4,100 |
| DEPARTMENT OF DEFENSE | 6930144 | APS 13-10 SLIN 00002 S.P. 3413-461 | Deep Sea Operations - 2 PARENT | 12.CCC | 27,857 |
| DEPARTMENT OF DEFENSE | 6927664 | APS-13-10 SLIN 0001 S.P. 3413-367 | Deep Sea Operations - 2 PARENT | 12.CCC | 3,126 |
| DEPARTMENT OF DEFENSE | 6931116 | APS-14-12 SLIN 0001, S.P 3470-167, TASK 4.12 | DASH Phase 4: Ocean Sensing Concepts | 12.CCC | 76,607 |
| University of Washington | | | Total for Applied Physical Sciences Corp. | | 107,590 |
| DEPARTMENT OF DEFENSE | 6931394 | BPO4415, SUB# UWSC7968 | Muscle's Energetic Versatility Arises From Its Crystalline and Multi-Component Structure | 12.431 | 92,020 |
| DEPARTMENT OF DEFENSE | 6918384 | SUBAWARD NO. 548656 | A Unified Approach to Abductive Inference | 12.431 | -11,459 |
| Yale University | | | Total for University of Washington | | 80,561 |
| DEPARTMENT OF DEFENSE | 6927741 | C13J11492(J00210) | High-Resolution Quantum Control of Chemical Reactions | 12.431 | 82,041 |
| Agentase LLC | | | Total for Yale University | | 82,041 |
| DEPARTMENT OF DEFENSE | 6929428 | ENZ-1302-002 | Bulk Agent Defeat System for Chemical Warfare Agents | 12.91 | 286,693 |
| Weston Geophysical Corporation | | | Total for Agentase LLC | | 286,693 |
| DEPARTMENT OF DEFENSE | 6926327 | FA9453-12-C-0220 | Three-Dimensional Crust and Upper Mantle Structure Beneath Eurasia from the Joint Inversion of P- and S-Wave Travel Times and Multi-Mode | 12.CCC | 115,791 |
| University of Chicago | | | Total for Weston Geophysical Corporation | | 115,791 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|---|---|--------|----------------|
| DEPARTMENT OF DEFENSE | 6929146 | FP054294-C | Fundamental Issues in Non-equilibrium Dynamics (MURI) | 12.431 | 186,253 |
| University of Connecticut | | | | | 186,253 |
| DEPARTMENT OF DEFENSE | 6921256 | FRS NO. 525227 | Production, Manipulation and Applications of Ultracold Polar Molecules | 12.800 | 452,371 |
| DSCI - MESH Solutions | | | | | 452,371 |
| DEPARTMENT OF DEFENSE | 6930966 | INTUITION-3492 N00014-13-C-0160 CLIN 01 | Enhancing Intuitive Decision Making Through Implicit Learning | 12.300 | 25,000 |
| DEPARTMENT OF DEFENSE | 6930967 | INTUITION-3492 N00014-13-C-0160 CLIN 02 | Enhancing Intuitive Decision Making Through Implicit Learning | 12.300 | 56,000 |
| DEPARTMENT OF DEFENSE | 6928194 | INTUITION-3492 N00014-13-C-0160 PARENT | Enhancing Intuitive Decision Making Through Implicit Learning | 12.300 | -44,550 |
| DEPARTMENT OF DEFENSE | 6930968 | N00014-13-C-0160 CLIN 03 | Enhancing Intuitive Decision Making Through Implicit Learning | 12.300 | 51,587 |
| University of California-Santa Barbara | | | | | 88,037 |
| DEPARTMENT OF DEFENSE | 6923035 | KK1131 | DEFINE "Dielectric Enhancements for Innovative Electronics" | 12.300 | 101,382 |
| DEPARTMENT OF DEFENSE | 6925317 | KK1238 | MULTI-SCALE SYSTEMS BIOLOGY OF MILITARY-RELEVANT CAUSES OF SYSTEMIC INFLAMMATORY RESPONSE SYNDROME AND MULTIPLE ORGAN DYSFUNCTION | 12.431 | 226,700 |
| Oasis | | | | | 328,082 |
| DEPARTMENT OF DEFENSE | 6930590 | OASIS14-SC-04 | STTR: Submarine Acoustic Counter-Detection Tactical Aid Decision | 12.CCC | 23,991 |
| BBN Technologies Corporation | | | | | 23,991 |
| DEPARTMENT OF DEFENSE | 6927051 | P.O. #9500010426; BBN REF ID #13901 | Photon Information Efficient Communications (PIECOMM) | 12.CCC | -126 |
| DEPARTMENT OF DEFENSE | 6931118 | PO 9500012484 : BBN REF ID #14400 | Superconducting Nanowire Electronics | 12.CCC | 161,916 |
| Total for BBN Technologies Corporation | | | | | 161,790 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|----------------------------|--|--------|----------------|
| FLIR Systems, Inc. | | | | | |
| DEPARTMENT OF DEFENSE | 6930677 | P12C-0002-001 | Agent-Exposure Surveillance and Protective Integrated Suits (ASPIIS) | 12.910 | 10,580 |
| | | | Total for FLIR Systems, Inc. | | 10,580 |
| Defense Engineering Corporation | | | | | |
| DEPARTMENT OF DEFENSE | 6930379 | PO #10103 | Fabrication of Conformal Electromagnetic Structures and Circuits | 12.800 | 86,633 |
| | | | Total for Defense Engineering Corporation | | 86,633 |
| Triquint Semiconductor, LP | | | | | |
| DEPARTMENT OF DEFENSE | 6925291 | PO #5103199 | DARPA NEXT Project Phase II & III | 12.CCC | 6,060 |
| | | | Total for Triquint Semiconductor, LP | | 6,060 |
| Propulsor Technology, Inc. | | | | | |
| DEPARTMENT OF DEFENSE | 6926912 | PO 12517 REV A | Reliability Prediction for Naval Shafting Under Cyclic Loads and Determination of Inspection Intervals | 12.CCC | 21,932 |
| | | | Total for Propulsor Technology, Inc. | | 21,932 |
| NextGen Aeronautics | | | | | |
| DEPARTMENT OF DEFENSE | 6930141 | PO 14-03 SALES ORDER 3084 | Growth of Ultra-long Carbon Nanotubes | 12.300 | 23,891 |
| | | | Total for NextGen Aeronautics | | 23,891 |
| Ministry of Defense of Israel | | | | | |
| DEPARTMENT OF DEFENSE | 6930221 | PO 4440560793 | Terahertz Quantum-Cascade Lasers and Imaging | 12.CCC | 218,742 |
| DEPARTMENT OF DEFENSE | 6931844 | PO 4440656472 | Novel multimaterial fiber system for magnetic wave detection | 12.CCC | 1,222 |
| | | | Total for Ministry of Defense of Israel | | 219,964 |
| General Dynamics | | | | | |
| DEPARTMENT OF DEFENSE | 6931566 | PURCHASE ORDER #2013-01032 | Interpretation of Spatial Language | 12.431 | 237,839 |
| | | | Total for General Dynamics | | 237,839 |
| Georgia Institute of Technology | | | | | |
| DEPARTMENT OF DEFENSE | 6918937 | R0897-G1 | Game Theoretic Learning for Distributed Autonomous Collaboration | 12.300 | 66,096 |
| DEPARTMENT OF DEFENSE | 6920742 | R0897-G15 | Game Theoretic Learning for Distributed Autonomous Collaboration | 12.300 | 35,896 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---------------------------------------|----------------|--|--|--------|------------------|
| DEPARTMENT OF DEFENSE | 6920503 | R6756-G2 | MURI-09: Distributed Learning and Information Dynamics in Networked Autonomous Systems | 12.800 | 462,638 |
| DEPARTMENT OF DEFENSE | 6923504 | RB492-G1 | Neuro-Inspired Adaptive Perception and Control for Agile Mobility of Autonomous Vehicles in Uncertain and Hostile Environments | 12.431 | 385,652 |
| DEPARTMENT OF DEFENSE | 6925152 | RC413-G3 | MURI: Multi-Functional Light-Matter Interfaces Based on Neutral Atoms and Solids | 12.800 | 336,832 |
| Exponent, Inc. | | | Total for Georgia Institute of Technology | | 1,287,114 |
| DEPARTMENT OF DEFENSE | 6927538 | S15-0551 | Development of Standard Methods and Approaches for the Use of Passive Samplers in Assessment and Management of Contaminated Sediment with Particular Emphasis on Polyethylene Passive Samplers | 12.CCC | 26,084 |
| Draper Laboratory Incorporated | | | Total for Exponent, Inc. | | 26,084 |
| DEPARTMENT OF DEFENSE | 6929746 | SC001-0000000843 | Field Emission Cathodes for Ion Pumps | 12.910 | 248,461 |
| University of Innsbruck | | | Total for Draper Laboratory Incorporated | | 248,461 |
| DEPARTMENT OF DEFENSE | 6928632 | SQUIP AGREEMENT UNDER W911NF-10-1-0284 | Scalable Quantum Information Processing (SQIP) with Trapped Ions | 12.431 | 520,494 |
| Quantum Signal LLC | | | Total for University of Innsbruck | | 520,494 |
| DEPARTMENT OF DEFENSE | 6930850 | STTR AGRMNT DTD 9/25/14 | Robust Terrain-Adaptive Vehicle Planning and Control | 12.CCC | 44,464 |
| Busek Company, Incorporated | | | Total for Quantum Signal LLC | | 44,464 |
| DEPARTMENT OF DEFENSE | 6930264 | STTR RESEARCH AGREEMENT EFFECTIVE 12/16/2013 | Ultra-High Density Ion Propulsion From Ionic Liquids Phase II | 12.CCC | 101,248 |
| Princeton University | | | Total for Busek Company, Incorporated | | 101,248 |
| DEPARTMENT OF DEFENSE | 6926616 | SUBAWARD NO 00002068 | CARS: A Platform for Scaling Formal Verification to Component-based Vehicular Software Stack | 12.300 | 401,649 |
| Arizona State University | | | Total for Princeton University | | 401,649 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|-----------------------------------|--|--------|----------------|
| DEPARTMENT OF DEFENSE | 6926159 | SUBAWARD NO. 13-950 | Translating Biochemical Pathways to Non-Cellular Environment | 12.431 | 123,475 |
| Dartmouth College | | | Total for Arizona State University | | 123,475 |
| DEPARTMENT OF DEFENSE | 6918261 | SUBAWARD NO. 490 | Modular Social Intelligence for Teaming and Coalition Adaptation of Heterogenous Autonomous Cooperative Agents (ACA _s) | 12.300 | 12,171 |
| Florida State University Foundation, Incorporated | | | Total for Dartmouth College | | 12,171 |
| DEPARTMENT OF DEFENSE | 6917498 | SUBAWARD NO. R00907 | Electric Ship Systems Research and Development Consortium | 12.CCC | 8,244 |
| Northwestern University | | | Total for Florida State University Foundation, Incorporated | | 8,244 |
| DEPARTMENT OF DEFENSE | 6928761 | SUBAWARD SP0005442 - PROJ0001738 | Multiscale Design and Manufacturing of Hybrid DWCNT-Polymer Fibers | 12.431 | 231,074 |
| Sri International | | | Total for Northwestern University | | 231,074 |
| DEPARTMENT OF DEFENSE | 6928879 | SUBCONTRACT 119-000245 | Biomimetic Exosuit Technologies to Mitigate Injuries and Enhance Metabolic Economy | 12.CCC | 241,782 |
| DEPARTMENT OF DEFENSE | 6931008 | SUBCONTRACT 27-001441, REL 1 | Mining and Understanding Software Enclaves (MUSE) | 12.CCC | 147,538 |
| CREARE, Incorporated | | | Total for Sri International | | 389,320 |
| DEPARTMENT OF DEFENSE | 6928375 | SUBCONTRACT NO. 70488 | Airborne Sensing for Ship Airwake Surveys Wake Swarm Project | 12.CCC | 17,224 |
| DCG Systems, Inc | | | Total for CREARE, Incorporated | | 17,224 |
| DEPARTMENT OF DEFENSE | 6923294 | SUBCONTRACT UDR. FA8650-11-C-7105 | Development of Superconducting Nanowire Photodetectors for Failure Analysis Systems | 12.CCC | 184,024 |
| University of Maryland | | | Total for DCG Systems, Inc | | 184,024 |
| DEPARTMENT OF DEFENSE | 6923511 | Z841801 | MURI: Atomtronics: Material and Device Physics of Quantum Gases | 12.431 | 410,492 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|------------------------------|----------------|--------------------|--|--------|-------------------|
| Zona Technology, Inc. | | | Total for University of Maryland | | 410,492 |
| DEPARTMENT OF DEFENSE | 6930242 | ZTI-MIT-ZEUSAD-2 | Multi-Layer Multi-Disciplinary Design Strategies for Complex Aeronautics Systems | 12.CCC | 93,265 |
| | | | Total for Zona Technology, Inc. | | 93,265 |
| | | | TOTAL for Department of Defense | | 29,787,977 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--------------------------------------|----------------|---|--|--------|-------------|
| DEPARTMENT OF ENERGY | | | | | |
| Battelle Energy Alliance, LLC | | | | | |
| DEPARTMENT OF ENERGY | 6926209 | 00126858 | Optimization of Deep Borehole Systems for HLW Disposal | 81.CCC | 296,707 |
| DEPARTMENT OF ENERGY | 6926607 | 128728 | Scholarship for Nuclear Communications and Methods for Evaluation of Nuclear Project Acceptability | 81.CCC | 185,912 |
| DEPARTMENT OF ENERGY | 6929536 | RELEAS01/CONTRACT00112583 | Multivariate Calibration of Complex Simulation Codes Using Disparate Types of Evidence | 81.CCC | 71,390 |
| DEPARTMENT OF ENERGY | 6930873 | RELEAS02/CONTRACT00112583 | Identify Key Technological Needs for a Zero Carbon Energy System for the United States by Region | 81.CCC | 83,871 |
| DEPARTMENT OF ENERGY | 6925211 | RELEASE #000050/CONTRACT#00000063 | High-Temperature Salt-Cooled Reactor for Power and Process Heat | 81.CCC | 1,161,447 |
| DEPARTMENT OF ENERGY | 6931121 | RELEASE #000050/CONTRACT#63 | High-Temperature Salt-Cooled Reactor for Power and Process Heat | 81.CCC | 972,856 |
| DEPARTMENT OF ENERGY | 6931261 | RELEASE 00055 / CONTRACT 00000063 | NUCLEAR HYBRID SYSTEM FOR VARIABLE ELECTRICITY AND OIL SHALE | 81.CCC | 31,246 |
| DEPARTMENT OF ENERGY | 6931403 | RELEASE 01/CONTRACT 00112583 | Multivariate Calibration of Complex Simulation Codes Using Disparate Types of Evidence | 81.CCC | 28,493 |
| DEPARTMENT OF ENERGY | 6925222 | RELEASE 51 /CONTRACT63 | Protectiveness and stability of the zirconium oxide in early-phase corrosion of zirconium alloys - predictive relations to surface structure and composition | 81.CCC | 13,256 |
| DEPARTMENT OF ENERGY | 6928756 | RELEASE 56/CONTRACT 00000063 | Cross-Section Generation of High-Fidelity Multi-Physics Simulations from High-Fidelity Monte Carlo Calculations | 81.CCC | 67,429 |
| DEPARTMENT OF ENERGY | 6931525 | RELEASE 6 / CONTRACT 112583 | Transient Modeling of Integrated Nuclear Energy Systems: Firebrick Resistance-Heated Energy Storage at Massachusetts Institute of Technology | 81.CCC | 33,051 |
| DEPARTMENT OF ENERGY | 6931265 | RELEASE NO. 00003 / CONTRACT NO. 00112583 | INL-NUC Collaboration Activities at Massachusetts Institute of Technology | 81.CCC | 22,335 |
| DEPARTMENT OF ENERGY | 6931188 | RELEASE NO. 00004 / CONTRACT NO. 00112583 | Development of State of the Art Capabilities to Support TREAT Modeling and Simulation | 81.CCC | 88,654 |
| DEPARTMENT OF ENERGY | 6931396 | RELEASE NO. 00005 / CONTRACT NO. 00112583 | Cross Section Generation in High Fidelity Multi-Physics Simulations from High Fidelity Monte Carlo Calculations | 81.CCC | 84,676 |
| DEPARTMENT OF ENERGY | 6925178 | RELEASE49/CONTRACT63 | 3117 Life Prediction of Spent Fuel Storage Canister Material | 81.CCC | 123,314 |
| DEPARTMENT OF ENERGY | 6929332 | RELEASE52/CONTRAC63 | University Lead for the Nuclear Hybrid Systems Core of the Institute for Nuclear Energy Science and Technology (INEST) | 81.CCC | 148,673 |
| DEPARTMENT OF ENERGY | 6927656 | RELEASE55/CONTRAC63 | NUCLEAR HYBRID SYSTEM FOR VARIABLE ELECTRICITY AND OIL SHALE | 81.CCC | 24,209 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|---------------------------------|---|--------|------------------|
| Jefferson Science Associates, LLC | | | | | |
| DEPARTMENT OF ENERGY | 6926116 | 12-P2092 | MOLLER Engineering | 81.049 | 50,382 |
| DEPARTMENT OF ENERGY | 6930896 | 15-P0048 | BaBar DIRC Focusing Study | 81.CCC | 8,106 |
| DEPARTMENT OF ENERGY | 6930721 | RFQ JSA 14Q346822 / PO 15-P0048 | BaBar DIRC Focusing Study | 81.CCC | 19,058 |
| Total for Battelle Energy Alliance, LLC | | | | | 3,437,518 |
| Harvard University | | | | | |
| DEPARTMENT OF ENERGY | 6923937 | 133512-02 | Transport and Imaging of Mesoscopic Phenomena in Single and Bilayer Graphene | 81.049 | 0 |
| DEPARTMENT OF ENERGY | 6920743 | 133555-5028381 | Transport and Imaging of Mesoscopic Phenomena in Single and Bilayer Graphene | 81.049 | 156,374 |
| Total for Harvard University | | | | | 156,374 |
| Brookhaven Science Associates, LLC | | | | | |
| DEPARTMENT OF ENERGY | 6924871 | 192272 | Design, Fabrication, Integration and Testing of the Intermediate Silicon Tracker (IST) for STAR | 81.CCC | 57,262 |
| DEPARTMENT OF ENERGY | 6930719 | 276503 | Maintenance of the Intermediate Silicon Tracker (IST) for the STAR Experiment at Brookhaven National Laboratory | 81.CCC | 1,753 |
| Total for Brookhaven Science Associates, LLC | | | | | 59,015 |
| Columbia University | | | | | |
| DEPARTMENT OF ENERGY | 6930075 | 2(GG008553) | Device and Fabrication Technology for the Next Generation of Medium Voltage Vertical Transistors | 81.135 | 237,558 |
| Total for Columbia University | | | | | 237,558 |
| University of Wyoming | | | | | |
| DEPARTMENT OF ENERGY | 6930170 | 2014-1100-20966-MIT | The MIT-EMAR Process for CO2 Capture as Feedstock for Production of Commodity Chemicals | 81.087 | 136,186 |
| Total for University of Wyoming | | | | | 136,186 |
| Research Triangle Institute | | | | | |
| DEPARTMENT OF ENERGY | 6931152 | 2-340-0214469-51895L | Engine fuel reformer for natural gas | 81.135 | 118,784 |
| Total for Research Triangle Institute | | | | | 118,784 |
| Brookhaven National Laboratory | | | | | |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--------------------------------|----------------|-----------------------------------|---|--------|------------------|
| DEPARTMENT OF ENERGY | 6930254 | 269362 | Repair of the forward GEM Tracker for the STAR Experiment | 81.CCC | 6,389 |
| University of Michigan | | | | | 6,389 |
| DEPARTMENT OF ENERGY | 6929523 | 3002219006 | CERC-CV: U.S. -China Clean Energy Research Center for Clean Vehicles | 81.087 | 169,801 |
| DEPARTMENT OF ENERGY | 6931203 | 3003222367 | Consortium for Verification Technology (CVT) | 81.113 | 280,382 |
| DEPARTMENT OF ENERGY | 6925773 | SUBCONTRACT #3002272312 | Transient Safety Analysis of Fast Spectrum TRU Burning LWRs with Internal Blankets | 81.CCC | 77,548 |
| University of Delaware | | | | | 527,731 |
| DEPARTMENT OF ENERGY | 6928524 | 30190 | ARRA - Macromolecular Acid Catalysts for Lignocellulosic Biomass Conversion to Levulinic Acid | 81.049 | -4,565 |
| DEPARTMENT OF ENERGY | 6925185 | PO NO. 28002 | Low cost back contact heterojunction solar cells on thin c-Si wafers: integrating laser and thin film processing for improved manufacturability | 81.087 | 156,010 |
| UT- Battelle LLC | | | | | 151,445 |
| DEPARTMENT OF ENERGY | 6923823 | 4000102892 | Consortium for Advanced Simulation of LWRs (CASL) | 81.CCC | 875,158 |
| DEPARTMENT OF ENERGY | 6926987 | 4000109825 | Consortium for Advanced Simulation of LWRs (CASL) | 81.CCC | 249,119 |
| DEPARTMENT OF ENERGY | 6923222 | SUBCONTRACT NO. 4000100452 | ITER ECH Transmission Line System: Research and Scientific Support | 81.CCC | 173,057 |
| DEPARTMENT OF ENERGY | 6925602 | SUBCONTRACT NO. 4000112466 | US ITER Central Solenoid (CS) MIT Reviews | 81.CCC | 0 |
| Alstom Power | | | | | 1,297,335 |
| DEPARTMENT OF ENERGY | 6926029 | 4100198339 ITEM 10 | Cost Of Energy reduction for offshore Tension Leg Platform (TLP) wind turbine systems through advanced control strategies for energy yield improvement, load mitigation and stabilization | 81.087 | 18,981 |
| University of Rochester | | | | | 18,981 |
| DEPARTMENT OF ENERGY | 6928068 | 416107-G | Magnet PTOF | 81.049 | 777,369 |
| DEPARTMENT OF ENERGY | 6921558 | PO #415023-G, UR ACCOUNT #5-24431 | Fusion Science Center for Extreme States of Matter Fast Ignition Physics | 81.049 | 94,826 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|--------------------|--|--------|----------------|
| University of Wisconsin-Madison | | | Total for University of Rochester | | 872,196 |
| DEPARTMENT OF ENERGY | 6926808 | 424K351 | Enhancement of SOFC Cathode Electrochemical Performance Using Multi-Phase Interfaces | 81.089 | 100,345 |
| Westinghouse Electric Company, LLC | | | Total for University of Wisconsin-Madison | | 100,345 |
| DEPARTMENT OF ENERGY | 6926954 | 4500456715 | High Temperature Accident Tolerant Cladding with High Density Fuel | 81.121 | 247,734 |
| Pennsylvania State University | | | Total for Westinghouse Electric Company, LLC | | 247,734 |
| DEPARTMENT OF ENERGY | 6931092 | 5023-MIT-DOE-2377 | Ensemble cell-wide kinetic modeling of anaerobic organisms to support fuels and chemicals production | 81.049 | 103,941 |
| DEPARTMENT OF ENERGY | 6930592 | 5028-MIT-DOE-1090 | Center for Lignocellulose Structure and Formation (CLSF) | 81.049 | 164,997 |
| The Research Foundation - Stony Brook University | | | Total for Pennsylvania State University | | 268,937 |
| DEPARTMENT OF ENERGY | 6920499 | 51055 | Northeastern Chemical Energy Storage Center (NOCESC) | 81.049 | 40,381 |
| Bay Area Photovoltaic Consortium | | | Total for The Research Foundation - Stony Brook University | | 40,381 |
| DEPARTMENT OF ENERGY | 6927896 | 60212346-51077-J | Design Principles and Defect Tolerances of Silicon / III-V Multijunction Interfaces | 81.087 | 242,972 |
| DEPARTMENT OF ENERGY | 6932020 | 60962268-51077 | Defect Identification and Mitigation in High-Lifetime Silicon Materials: Growth, Processing, Reliability | 81.087 | 58,063 |
| Stanford University | | | Total for Bay Area Photovoltaic Consortium | | 301,036 |
| DEPARTMENT OF ENERGY | 6931109 | 60779061-115503 | Perovskite Solar Cells for High Efficiency Tandems | 81.087 | 112,012 |
| State University of New York | | | Total for Stanford University | | 112,012 |
| DEPARTMENT OF ENERGY | 6931213 | 68799 | EFRC:NorthEast Center for Chemical Energy Storage (NECCES) | 81.049 | 240,455 |
| | | | Total for State University of New York | | 240,455 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|-----------------------------|--|--------|----------------|
| Harvard Medical School | | | | | |
| DEPARTMENT OF ENERGY | 6930190 | AGMT DTD 06/10/2014 | Letter Agreement: Stephanie Young | 81.049 | 57,108 |
| DEPARTMENT OF ENERGY | 6930472 | DOE:DE-F02ER63445 | Letter Agreement: Daniel Goodman | 81.049 | 48,546 |
| | | | Total for Harvard Medical School | | 105,654 |
| Impact Technologies, LLC | | | | | |
| DEPARTMENT OF ENERGY | 6926076 | AGMT DTD. 4/1/12 | Advanced Millimeter Wave Drilling System | 81.087 | 60,882 |
| DEPARTMENT OF ENERGY | 6932037 | AMENDMENT 1 - PHASE II | Deep Borehole Storage of Nuclear Waste Using MMW Technology | 81.049 | 79,813 |
| DEPARTMENT OF ENERGY | 6931100 | STTR AGRMT DATED 07/28/2014 | Deep Borehole Storage of Nuclear Waste Using MMW Technology | 81.049 | 40,416 |
| | | | Total for Impact Technologies, LLC | | 181,111 |
| Calabazas Creek Research, Inc | | | | | |
| DEPARTMENT OF ENERGY | 6927699 | AGMT. DTD. 4/10/13 | Gyrotron Internal Mode Converter Research | 81.049 | 18,521 |
| | | | Total for Calabazas Creek Research, Inc | | 18,521 |
| Advanced Conductor Technologies LLC | | | | | |
| DEPARTMENT OF ENERGY | 6927763 | AGMT. DTD. 4/22/13 | REBCO coated conductor cables for fusion magnets Phase II | 81.049 | 88,422 |
| | | | Total for Advanced Conductor Technologies LLC | | 88,422 |
| Composite Technology Development, Inc. | | | | | |
| DEPARTMENT OF ENERGY | 6930378 | AGMT. DTD. 7/9/14 | Neutron resistant insulation for HTS fusion magnets | 81.049 | 42,920 |
| | | | Total for Composite Technology Development, Inc. | | 42,920 |
| SURA / Jefferson Lab | | | | | |
| DEPARTMENT OF ENERGY | 6921867 | P.O. 10-P2471 | Experimental Research Supervision at Jefferson Lab | 81.049 | -4,444 |
| | | | Total for SURA / Jefferson Lab | | -4,444 |
| Detroit Diesel Corporation | | | | | |
| DEPARTMENT OF ENERGY | 6923260 | PO # 1590015204 | ARRA - Fuel-Economy Improvement via Low-Engine-friction Technologies | 81.049 | 87,312 |
| | | | Total for Detroit Diesel Corporation | | 87,312 |
| Ford Motor Company | | | | | |
| DEPARTMENT OF ENERGY | 6928693 | PO 14164101_001 | Rapid Freeform Sheet Metal Forming: Technology Development and System Verification | 81.086 | 185,662 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|---------------------------------------|--|--------|----------------|
| ALSTOM Renewable US LLC | | | | | |
| DEPARTMENT OF ENERGY | 6930624 | PO 4100750739 | Advanced Algorithms for the Forecasting of Free Surface Elevations in a Seastate | 81.087 | 9,515 |
| Total for ALSTOM Renewable US LLC | | | | | 9,515 |
| Bettis Atomic Power | | | | | |
| DEPARTMENT OF ENERGY | 6926212 | PO#7009771 | The Effect of Environment, Chemistry and Microstructure on the Corrosion Fatigue Behavior of Austenitic Stainless Steels | 81.CCC | 83,301 |
| Total for Bettis Atomic Power | | | | | 83,301 |
| Ohio State University | | | | | |
| DEPARTMENT OF ENERGY | 6925099 | RF01275008 | III-V/Active-Si Integration for Low-Cost High-Performance Concentrator Photovoltaics | 81.087 | 21,869 |
| Total for Ohio State University | | | | | 21,869 |
| Dawn Research, Inc. | | | | | |
| DEPARTMENT OF ENERGY | 6930201 | RSA UNDER 11501022 | Development of low cost method for fabrication of metal neutron guides | 81.049 | 19,901 |
| DEPARTMENT OF ENERGY | 6931946 | TBD | SBIR Phase II: Development of low cost method for fabrication of metal neutron guides | 81.049 | 21,415 |
| Total for Dawn Research, Inc. | | | | | 41,316 |
| Princeton Plasma Physics Laboratory | | | | | |
| DEPARTMENT OF ENERGY | 6931075 | S013882-U | SciDAC-3 EPSI Project | 81.049 | 19,898 |
| DEPARTMENT OF ENERGY | 6929228 | SUBCONTRACT NO. S012981-U | MIT Collaborations on NSTX-U, D-NSTX-SOW-72-181 | 81.CCC | 118,871 |
| Total for Princeton Plasma Physics Laboratory | | | | | 138,769 |
| Aerodyne Research Incorporated | | | | | |
| DEPARTMENT OF ENERGY | 6930649 | SBIR SUBAGREEMENT EFFECTIVE 8/15/2014 | Dual Quantum Cascade Laser System for Simultaneous Measurements of 13CH4 and CH3D Methane Isotopologues | 81.CCC | 2,923 |
| DEPARTMENT OF ENERGY | 6926432 | SUBCONTRACT AGMT ARI 10747-1 | Quantum Cascade Laser System for Simultaneous Measurements of 13CO and C18O Carbon Monoxide Isotopologues | 81.049 | 68,563 |
| DEPARTMENT OF ENERGY | 6926516 | SUBCONTRACT ARI 10750-2 | Biomass to Hydrocarbons by Catalytic Fast Pyrolysis. | 81.049 | 14,445 |
| Total for Aerodyne Research Incorporated | | | | | 85,931 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|--|--|--------|----------------|
| AdvR, Inc. | | | | | |
| DEPARTMENT OF ENERGY | 6929431 | STTR AGREEMENT 02/18/2014 UNDER DE-SC0011377 | STTR PH I: Optical Waveguide Cross-Correlator for Attosecond Timing Synchronization | 81.049 | 27,899 |
| University of California - Berkeley | | | Total for AdvR, Inc. | | 27,899 |
| DEPARTMENT OF ENERGY | 6928724 | SUB # 7822 PO # BB00104774 | Self-sustaining thorium boiling water reactors | 81.CCC | 34,353 |
| Arizona State University | | | Total for University of California - Berkeley | | 34,353 |
| DEPARTMENT OF ENERGY | 6929080 | SUBAWARD 14-381 | Thin Silicon Solar Cells: A Path to 35% Shockley-Queisser Limits | 81.087 | 131,476 |
| DEPARTMENT OF ENERGY | 6929757 | SUBAWARD NO. 13-175 | In-situ X-ray Nanocharacterization of Defect Kinetics in Chalcogenide Solar Cell Materials | 81.087 | 47,060 |
| University of Nebraska | | | Total for Arizona State University | | 178,536 |
| DEPARTMENT OF ENERGY | 6926701 | SUBAWARD 25-1217-0013-003 | Radiation tolerance and mechanical properties of nanostructured ceramic/metal composites | 81.121 | 155,275 |
| Princeton University | | | Total for University of Nebraska | | 155,275 |
| DEPARTMENT OF ENERGY | 6920547 | SUBAWARD NO. 00001702 | Energy Frontier Research Center in Combustion Science | 81.049 | 34,531 |
| University of California | | | Total for Princeton University | | 34,531 |
| DEPARTMENT OF ENERGY | 6925057 | SUBAWARD NO. 0130 G PA291 | Dynamic metabolic model building based on ensemble modeling approach | 81.049 | 226,587 |
| Los Alamos National Security, L.L.C. | | | Total for University of California | | 226,587 |
| DEPARTMENT OF ENERGY | 6927651 | SUBCONTRACT #232591 | Phase Stability of Multi-Component Nanocomposites Under Irradiation | 81.CCC | 96,910 |
| DEPARTMENT OF ENERGY | 6931281 | SUBCONTRACT #314311 | Nanochannels 749674-001-10 | 81.CCC | 49,862 |
| DEPARTMENT OF ENERGY | 6925156 | SUBCONTRACT 160097-1 | ARRA - Advancing our Understanding of Photonic Band Structures for Accelerators | 81.CCC | 69,089 |

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FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|---|--|--------|------------------|
| DEPARTMENT OF ENERGY | 6928567 | SUBCONTRACT 248341-1 | Development of a New, Neutron, Time Correlated, Interrogation Method for Measurement of 235U Content in LWR Fuel Assemblies | 81.CCC | 104,870 |
| DEPARTMENT OF ENERGY | 6920708 | SUBCONTRACT: 72297-001-09: TASK 2 | Task 1: LANL LDRD-DR Project Enhanced Radiation Damage Resistance via Manipulation of the Properties of Nanoscale Materials | 81.CCC | -25 |
| University of Washington | | | | | 320,706 |
| DEPARTMENT OF ENERGY | 6930875 | SUBCONTRACT 762650 | Project 8: Measuring Neutrino Masses Using Frequency-Based Techniques | 81.049 | 40,000 |
| Lawrence Berkeley National Laboratory | | | | | 40,000 |
| DEPARTMENT OF ENERGY | 6917334 | SUBCONTRACT NO. 6838062 | Molecular Determinants of Community Activity, Stability and Ecology (MDCASE) Environmental Stress Pathway project Formerly Known as Rapid Detection of | 81.CCC | 138,709 |
| DEPARTMENT OF ENERGY | 6920789 | SUBCONTRACT NO. 6896518 | Center for Nanoscale Control of Geological CO2 | 81.CCC | 52,629 |
| DEPARTMENT OF ENERGY | 6922118 | SUBCONTRACT NO. 6927716 | Advanced 3D Geophysical Imaging Technologic for Geothermal Resource Characterization. | 81.CCC | 131,470 |
| DEPARTMENT OF ENERGY | 6923287 | SUBCONTRACT NO. 6947174 | Natural Ventilation for Cooling in Commercial and Residential Buildings and Data Centers | 81.CCC | 45,760 |
| DEPARTMENT OF ENERGY | 6927117 | SUBCONTRACT NO. 7038094 | A BES Predictive Theory and Modeling for Materials and Chemical Sciences | 81.CCC | 196,419 |
| DEPARTMENT OF ENERGY | 6927680 | SUBCONTRACT NO. 7056411 | First Principles Calculations of Existing and Novel Electrode Materials | 81.CCC | 251,699 |
| DEPARTMENT OF ENERGY | 6927681 | SUBCONTRACT NO. 7056592 | Design and Scalable Assembly of High Density Low Tortuosity Electrodes | 81.CCC | 315,655 |
| DEPARTMENT OF ENERGY | 6928821 | SUBCONTRACT NO. 7075314 | High-throughput sorting of microbial cells with specific functional traits for single cell genomics by combining labeling with heavy water, Raman microscopy, microfluidics and flow cytometry | 81.CCC | 414,376 |
| DEPARTMENT OF ENERGY | 6931129 | SUBCONTRACT NUMBER 7204982 | Molecular Determinants of Community Activity, Stability and Ecology (MDCASE) | 81.CCC | 365,764 |
| Technic Inc. | | | | | 1,912,480 |
| DEPARTMENT OF ENERGY | 6931508 | SUBCONTRACT RSRCH AGRMINT EFFECTIVE 01/01/2015 | Silver-free Metallization Technology for Producing High Efficiency, Industrial Silicon Solar Cells | 81.CCC | 75,140 |
| Total for Technic Inc. | | | | | 75,140 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|----------------------------------|--|--------|----------------|
| National Renewable Energy Laboratory | | | | | |
| DEPARTMENT OF ENERGY | 6926772 | UGA-0-41029-06 | Development of Novel Low-Cost Thin-Film PV Absorbers With Tunable Optical and Electronic Properties | 81.CCC | 21,496 |
| DEPARTMENT OF ENERGY | 6927450 | UGA-0-41029-09 | Sustainable Photovoltaics and Scalable Concentrating Solar Power (SERIUS) - MIT | 81.CCC | 232,347 |
| DEPARTMENT OF ENERGY | 6929283 | UGA-0-41029-12 | Coupling of Mechanical Behavior of Cell Components to Electrochemical-Thermal Models Under Crush | 81.CCC | 143,187 |
| DEPARTMENT OF ENERGY | 6929153 | UGA-0-41029-13 | Systems Engineering for Wind Energy - Research Studies | 81.CCC | 5,789 |
| DEPARTMENT OF ENERGY | 6930865 | UGA-0-41029-16/ER392000 | Center for Next Generation of Materials by Design: Incorporating Metastability | 81.049 | 443,600 |
| DEPARTMENT OF ENERGY | 6931855 | UGA-0-41029-17 | Evaluate Degradation Mechanisms in old Photovoltaic (PV) Modules from Sacramento Municipal Utility District | 81.CCC | 20,481 |
| DEPARTMENT OF ENERGY | 6925379 | ZGV-2-22438-01 | Development and Validation of a Nonlinear Fluid-Impulse Hydrodynamics Module for FAST | 81.087 | 93,948 |
| Total for National Renewable Energy Laboratory | | | | | 960,848 |
| The Joint Institute for Strategic Energy Analysis | | | | | |
| DEPARTMENT OF ENERGY | 6929608 | UGA-0-41029-14 TASK NO. 6A502050 | Water Intensity of Unconventional Hydrocarbon Development | 81.CCC | 21,500 |
| Total for The Joint Institute for Strategic Energy Analysis | | | | | 21,500 |
| Alliance for Sustainable Energy, LLC | | | | | |
| DEPARTMENT OF ENERGY | 6930122 | UGA-0-41029-15/ TASK SA120386 | ReEDS-USREP Model Collaboration | 81.CCC | 50,056 |
| Total for Alliance for Sustainable Energy, LLC | | | | | 50,056 |
| University of Texas - Austin | | | | | |
| DEPARTMENT OF ENERGY | 6928873 | UTA13-000874 | Extreme-scale Bayesian inference for uncertainty quantification of complex simulations) | 81.049 | 97,560 |
| DEPARTMENT OF ENERGY | 6931037 | UTA14-000839 | Physics and Engineering Design Support for ITER Electron Cyclotron Emission (ECE) Diagnostic Front-End and X-Mode Radiometer | 81.CCC | 63,409 |
| DEPARTMENT OF ENERGY | 6931207 | UTA14-001222 | Nuclear Technology R&D Strategies in an Era of Energy Price Uncertainty | 81.121 | 33,561 |
| Total for University of Texas - Austin | | | | | 194,531 |
| UChicago Argonne, LLC | | | | | |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|--------------------|---|--------|-------------------|
| DEPARTMENT OF ENERGY | 6928492 | WO 2J-30101-0005A | Draft Conversion SAR with Updated LEU Element Design for LEU Conversion of the MITR-II Research Reactor | 81.CCC | 253,559 |
| DEPARTMENT OF ENERGY | 6928470 | WO 2J-30101-0006A | Ancillary Safety Analysis for LEU Conversion of the MITR-II - work order #6 | 81.CCC | 83,656 |
| DEPARTMENT OF ENERGY | 6928779 | WO 2J-30101-0007A | Task 7: LEU UZrH Feasibility Study in Support of LEU Conversion of the MITR-II Research Reactor | 81.CCC | 216,275 |
| Total for UChicago Argonne, LLC | | | | | 553,490 |
| TOTAL for Department of Energy | | | | | 14,279,750 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|-----------------------------|---|--------|----------------|
| DEPARTMENT OF HEALTH & HUMAN SERVICES | | | | | |
| University of Texas-MD Anderson Cancer Center | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931658 | 00002863 | Project 3: Models for genetic assessment of tumor maintenance genes in PDAC | 93.396 | 130,774 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929245 | 00918640/54444 | Project 3: Models for genetic assessment of tumor maintenance genes in PDAC | 93.396 | 82,952 |
| Total for University of Texas-MD Anderson Cancer Center | | | | | 213,726 |
| Children's Hospital Boston | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6925412 | 0000527996 | Developmental biology of human erythropoiesis (Project 4) | 93.839 | 56,574 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 2746749 | AGREEMENT #RSTFD 0000600634 | Billing Agreement: Maimuna Manjumder (R01) | 93.789 | 43,047 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931050 | RSTFD00000602424 | Customized stem cells for clinical application in blood disorders | 93.847 | 207,260 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929715 | RSTFD0000570507 | Advanced Fetal Imaging | 93.286 | 235,103 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931111 | RSTFD0000603833 | Apnea index as an outcome measure of IGF-1 treatment of Rett syndrome | 93.865 | 1,326 |
| Total for Children's Hospital Boston | | | | | 543,310 |
| University of Pittsburgh | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6923091 | 0013954 (118082-3) | Novel Glaucoma Diagnostics for Structure and Function | 93.867 | 68,596 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6925825 | 0025089 (122652-1) | Spatial Segregation of Cell Functioning During Motility | 93.859 | 76,702 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931040 | 0038320(124919-2) | Novel Glaucoma Diagnostics for Structure and Function | 93.867 | 41,576 |
| Total for University of Pittsburgh | | | | | 186,874 |
| Beth Israel Deaconess Medical Center | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6926207 | 01025585 | Brain Function and Structure in Young Children at Familial Risk for Schizophrenia | 93.242 | 1,396 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931507 | 01026851 | Validating Biomarkers for the Prodrome and Transition to Psychosis in Shanghai | 93.242 | 11,025 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930098 | 010-27094 | Letter Agreement: Jordan Spatz | 93.CCC | 3,012 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931103 | 5 R01 GM104987-08 | Research Resource for Complex Physiologic Signals | 93.859 | 249,033 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|---------------------------------------|--|--------|-------------|
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928537 | 9 R01 GM104987-07 | Research Resource for Complex Physiologic Signals | 93.859 | 7,223 |
| University of California | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929740 | 0160 G RC578 | Narratives in the Informational Patient Society and their Association with Health Behavior | 93.859 | 8,798 |
| Total for University of California | | | | | |
| 8,798 | | | | | |
| Icahn School of Medicine at Mount Sinai | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929774 | 0254-3162-4609 | Epigenetic Mechanisms of Depression | 93.242 | 69,166 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931854 | 0254-3164-4609 | Epigenetic Mechanisms of Depression | 93.242 | 11,126 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930285 | ISMMS NO. 0258-0509/HHSNZ72201400008C | NAIAD Centers of Excellence for Influenza Research and Surveillance | 93.CCC | 551,410 |
| Total for Icahn School of Medicine at Mount Sinai | | | | | |
| 631,701 | | | | | |
| Mount Sinai Medical Center | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928347 | 0255-9764-4609 | Theranostic HDL nanoparticles for inflammatory macrophages in atherosclerosis | 93.286 | 5,029 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6923327 | MSSM NO. 0258-3921/HHSNZ68201000045C | Translational Nanomedical Therapies for Cardiac and Vascular Disease | 93.CCC | 1,083,790 |
| Total for Mount Sinai Medical Center | | | | | |
| 1,088,819 | | | | | |
| Research Foundation of SUNY-Albany | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6927628 | 09-18 | RNA Modifications as Biomarkers of Environmental Stress and Inflammation | 93.113 | -1,481 |
| Total for Research Foundation of SUNY-Albany | | | | | |
| -1,481 | | | | | |
| Columbia University | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929090 | 1 (GG007773-02) | Integrated Heart-Liver-Vascular Systems for Drug Testing in Human Health Disease | 93.286 | 15,074 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928408 | 1(GG007773-03) | Integrated Heart-Liver-Vascular Systems for Drug Testing in Human Health Disease | 93.286 | 3 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931486 | 2(GG006338) | Myofibroblasts in GI Cancers: A novel GEMM to study tumor-CAF interactions | 93.397 | 22,576 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929094 | 2(GG006413-39) | Understanding global reprogramming of central carbon metabolism in cancer | 93.310 | -5,097 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---------------------------------------|----------------|--------------------------------|--|--------|------------------|
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930614 | 2(GG006413-57) | Understanding global reprogramming of central carbon metabolism in cancer | 93.310 | 85,012 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930688 | 2(GG006726-51)(11-1546) | Health effects of Geochemistry of arsenic and manganese | 93.286 | 11,543 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929635 | 2(GG007617) P O G04804 | Mouse Models of Gastric Cancer | 93.393 | 55,290 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930471 | 3(GG007773-04) | Integrated Heart-Liver-Vascular Systems for Drug Testing in Human Health Disease | 93.286 | 460,890 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6927142 | PO G03501 AWARD 1(GG007522) | Motor Neuron Selector Genes and Mechanism of Their Action | 93.853 | 392,030 |
| Dana Farber Cancer Institute | | | | | 1,037,321 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928787 | 1006716 | Antigen Presentation and T Cell Programming in Human Autoimmune Diseases | 93.855 | 281,592 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930574 | 1188503 | Eliciting B cells to produce anti-HIV gp41 MPER-specific neutralizing antibodies | 93.855 | 233,516 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928903 | 1214501 | Assaying GBM growth and therapy response in single cells and tumorspheres (PQ17) | 93.394 | 4,230 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6926764 | 1214503 | Assaying GBM growth and therapy response in single cells and tumorspheres (PQ17) | 93.394 | 222,548 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6927981 | 1216401 | Impact of MHC Genotype on Ex Vivo T cell Function in Type 1 Diabetes | 93.847 | 358,823 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930417 | 1217701 | The Dana-Farber Cancer Institute Cancer Target Discovery and Development Center | 93.394 | 69,619 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929482 | 1225411 | DFHC SPORE in Prostate Cancer - Project 1 | 93.397 | 19,345 |
| University Health Network | | | | | 1,189,673 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6924932 | 101875.4 | The RAs/Mapik Pathway in Cardiovascular Disease | 93.837 | 59,585 |
| Baylor College of Medicine | | | | | 59,585 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930717 | 101991083 PO NUMBER 5601049168 | Restricted Parent: Center for Protein Folding Machinery | 93.867 | 155,424 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930494 | 5R01HD032067-18 | Bone Morphogenic Protein Signaling Pathways in Uterine Biology | 93.865 | 50,898 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|--|---|--------|----------------|
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928540 | PO #5600923755 SHOPPING CART 101835478 PRIME 5PN2EY016525-10 | Restricted Parent: Center for Protein Folding Machinery | 93.867 | 42,568 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6922879 | PO 5600594550-101321035 | Modulation of NF-kB Signaling by Immunoproteobiotics | 93.847 | 6,754 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930718 | PRIME AWARD NO. 5-PN-2EY016525-08 | Restricted Parent: Center for Protein Folding Machinery | 93.867 | 396,649 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928699 | SHOPPING CART 101835478 PRIME 5PN2EY016525-10 | Restricted Parent: Center for Protein Folding Machinery | 93.867 | 49,541 |
| Total for Baylor College of Medicine | | | | | 701,834 |
| Booz, Allen and Hamilton, Inc. | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929808 | 104749SB0W | Computational Modeling for Pre-Trial Decision Support | 93.CCC | 57,938 |
| Total for Booz, Allen and Hamilton, Inc. | | | | | 57,938 |
| Brigham & Women's Hospital | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6922066 | 105888 | Engineered induction of a stem cell homing response | 93.939 | 15,747 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928290 | 106368 | National Alliance for Medical Image Computing: Core 1 A | 93.286 | 13,365 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928358 | 106370 | National Alliance for Medical Image Computing: Core 2 | 93.286 | 0 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929369 | 106458 | Informatics for Integrating Biology and the Bedside (i2b2) - Core 1 - Science and Tools Subcontracts - Yr 3 | 93.704 | 12,508 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929249 | 106462 | Informatics for integrating Biology and the Bedside (i2b2) – Core 4 Education | 93.704 | 92,089 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6925261 | 107667 | DI14 in Macrophage Activation | 93.837 | 9,861 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6925790 | 107958 | Development of FcRn-Targeted Nanoparticles for Efficient Oral Delivery of Insulin | 93.286 | 96,150 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928530 | 108787 | Informatics for Integrating Biology and the Bedside (i2b2) - Supplement | 93.879 | 4,922 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928415 | 109443 | Neuroimaging Analysis Center (NAC) - Technology Research and Development Core | 93.286 | 213,402 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928788 | 109471 | Multi-Scale Modeling of Sleep Behaviors in Social Networks | 93.859 | 129,372 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928869 | 109687 | Engineering a Biological Glucose Monitor | 93.847 | 102,553 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931053 | 110548 | Letter Agreement: Daniel Day | 93.867 | 31,215 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|-------------------------|---|--------|----------------|
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931909 | 111384 | Detection of cell type specific effects of pathway manipulation in neural cells | 93.866 | 16,319 |
| Harvard School of Public Health | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931283 | 111920_KROLL_PILOT | Pilot Development of a Dorchester Air Quality Surveillance System (DAQSS) | 93.113 | 16,762 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 2746118 | 112497-5069710 | Safety and Health Management of Hazards Associated with Emerging Technologies | 93.143 | 8,190 |
| Total for Brigham & Women's Hospital | | | | | 737,503 |
| St. Jude Medical | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929432 | 111942010-7571874 | Mechanisms to diversify repertoire and modify T cell activity after infection | 93.855 | 42,161 |
| Total for Harvard School of Public Health | | | | | 24,952 |
| Harvard University | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928011 | 112096.5028856 | Superfund Basic Research and Training Program superfund Metal Mixtures, Biomarkers and Neurodevelopment | 93.143 | 72,052 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6925662 | 138062-5042320 | High Resolution Connectomics of Mammalian Neural Circuits | 93.310 | 187,238 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931047 | GRANT#R01DA036898 | Letter Agreement: Mark Kendell Clement | 93.279 | 24,211 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6927646 | SUB 149047.5059022.1071 | NERP017: Genetic Analysis of Innate Immunity to Infection | 93.855 | 63,585 |
| Total for St. Jude Medical | | | | | 42,161 |
| Harvard Medical School | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929676 | 149739.5079223.0102 | Clinical Translational Science Award (CTSA) - MIT-CRC | 93.35 | -43,676 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931061 | 149739.5079223.0202 | Clinical Translational Science Award (CTSA) - MIT-CRC | 93.35 | 142,740 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928300 | 150737.5073859.0002 | Real time fMRI feedback and auditory processing in schizophrenia | 93.424 | -6,744 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928820 | 151529 | Training for Speech and Hearing Sciences | 93.173 | 47,652 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930548 | 151529.5063638.0104 | Training for Speech and Hearing Sciences | 93.173 | 38,033 |
| Total for Harvard University | | | | | 347,085 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---------------------------------------|----------------|-------------------------------|--|--------|----------------|
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931022 | 152754.5068079.0002 | Targeting a Novel Regulator of Brain Aging and Alzheimer's Disease | 93.866 | 273,592 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930784 | BA_FY15_CHAO | Letter Agreement: Chung-Yun (George) Chao | 93.172 | 48,546 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 2746285 | HMS FUND #152433 | Letter Agreement: Joel Brooks | 93.879 | 19,818 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 2746274 | HMS FUND #152433 | Letter Agreement: Marzyeh Ghassemi | 93.879 | 19,672 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 2746284 | HMS FUND #152433 | Letter Agreement: Tristan Naumann | 93.879 | 19,672 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 2746746 | HMS NO. 152433 | Letter Agreement: Marzyeh Ghassemi | 93.279 | 34,360 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 2746747 | HMS NO. 152433 | Letter Agreement: Tristan Naumann | 93.279 | 34,360 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931805 | SUBAWARD: 152448.5093967.0109 | Patient-Centered Information Commons | 93.172 | 5,680 |
| Research Foundation S.U.N.Y. | | | | | 633,706 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931096 | 15-01 | Translational control of ROS management | 93.113 | 120,262 |
| Rush University Medical Center | | | | | 120,262 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6924854 | 1-R01-RO57066-01A2 | Cartilage Degeneration and Repair By ADAMTSs and Hyaluronan Binding Proteins | 93.846 | -61 |
| Massachusetts General Hospital | | | | | -61 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6924435 | 218459 | Enhancing Self-Control of Cigarette Craving with Real-Time fMRI | 93.279 | 8,698 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 2746595 | 219396 | Letter agreement: Joseph Keller | 93.279 | 19,688 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6924807 | 219658 | Parallel Excitation Methods for High Field MRI | 93.286 | 101,984 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928119 | 220682 | Stephanie Nam, Off-Campus RA – 1/13-1/15 | 93.394 | 67,521 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6927610 | 222103 | Optimizing human B and T cell vaccines against HIV using humanized BLT mice | 93.855 | 214,437 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|---------------------------|---|--------|----------------|
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928940 | 223253 | SPORE: Targeted Therapies for Gliomas | 93.397 | 13,609 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929141 | 223711 | The Mammalian Stem Cell Niche in Cancer (CSIBD Pilot/feasibility) | 93.847 | 13,178 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930051 | 224256 | Stable, High Relaxivity MRI Contrast Agents | 93.286 | 82,276 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 2746685 | 224731 | Letter Agreement: Jesus Luevano | 93.847 | 4,652 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 2746758 | MGH ACCOUNT NO. 219423 | Billing Agreement: Bassel Khoury | 93.279 | 35,908 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 2746594 | MGH ACCOUNT PS NO. 219396 | Letter Agreement: Clarissa Zimmerman Cooley | 93.279 | 5,508 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 2746744 | MGH ACCOUNT PS NO. 219396 | Letter Agreement: Mohammad Mahdi Ghassemi | 93.279 | 35,122 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 2746696 | MGH ACCOUNT PS NO. 219423 | Advanced Multimodal Neuroimaging Training Grant R90 (Adrian Dalca) | 93.279 | 40,330 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6920923 | SUBAWARD 215009 | Small-Molecule Probes and Methods for Modulating Chromatin-Mediated Neuroplasticity | 93.279 | 17,852 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6924915 | SUBAWARD 219501 | In Vivo Systems Biology of Neurodegenerative Diseases | 93.866 | 37,569 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6926604 | SUBAWARD 221141 | Hypoxia-induced Metabolic Changes in Cancer | 93.866 | 157,219 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6925861 | SUBAWARD NO. 220701 | Ambulatory Monitoring of Vocal Function to Improve Voice Disorder Assessment | 93.173 | 30,755 |
| Total for Massachusetts General Hospital | | | | | 886,308 |
| Stanford University | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929027 | 26699040-47281-C | Center for Cancer Nanotechnology Excellence and Translation (CCNE-T) - Year 4 | 93.397 | 163,703 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929883 | 60391945-106845-A | Dynamic Imaging of EMT in the Breast Cancer Microenvironment | 93.396 | 244,226 |
| Total for Stanford University | | | | | 407,929 |
| Albert Einstein College | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931783 | 31521R | Stem cell-based Therapies for Mitigation of Acute Radiation Syndromes | 93.855 | 27,799 |
| Total for Albert Einstein College | | | | | 27,799 |
| University of Wisconsin-Madison | | | | | |

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FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---------------------------------------|----------------|---|--|--------|----------------|
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6927748 | 375K351 | Year 2: Resistance and Resiliency in a Natural Host-Microbe Symbiosis | 93.859 | 75,785 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928831 | 499K181 | Human iPS/ES Cell-Based Models for Predictive Neural Toxicity and Teratogenicity Administrative Supplement | 93.35 | 24 |
| Georgetown University | | | | | 75,809 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930175 | 410646-GR409880-MIT | Non-Invasive Evaluation of Transplant Kidney using OCT | 93.847 | 24,618 |
| Rutgers University | | | | | 24,618 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6924848 | 4482/PO#S1579843/ACCT#433885/ORGID10648 | Transient Behaviors Of Adapting Biological Systems | 93.859 | 168,212 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6925862 | 4677/PO#S1685723/ACCT#434428/ORGID10648 | Collaborative Research: Transient Behaviors of Adapting Biological Systems | 93.859 | 60,645 |
| Boston University | | | | | 228,857 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930177 | 4500001279 | Modeling bi-directional signaling and cytoskeletal dynamics in 3D cell migration | 93.393 | 235,278 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928481 | 4500001330 | Center for Innovation in Point of Care Technologies for the Future of Cancer Care | 93.286 | -23,736 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929218 | 4500001446 | Causal Analysis of Electrically Connected Neural Networks | 93.242 | 65,031 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929678 | 4500001520 | Integrative Analysis to Discover Genetic Factors behind Diabetes | 93.847 | 16,414 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930070 | 4500001555 | Modeling bi-directional signaling and cytoskeletal dynamics in 3D cell migration | 93.393 | -3,950 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928892 | FRN 4500001418 | Prefrontal and Medial-Temporal Interactions in Memory | 93.242 | 2,314 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931004 | FRN 4500001670 | Prefrontal and Medial-Temporal Interactions in Memory | 93.242 | 197,342 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6920709 | SUBAWARD NO. 4500000222 | CRCNS: GAMMA Rythms and Cell Assemblies | 93.853 | 234 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6927158 | SUBAWARD NO. 4500001147 | CRCNS: GAMMA Rythms and Cell Assemblies | 93.853 | 5,195 |
| Northeastern University | | | | | 494,122 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|----------------------------------|---|--------|----------------|
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6926399 | 500252 | Impact of Lipids on Compound Absorption: Mechanistic Studies and Modeling | 93.859 | 102,154 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6926456 | 5002581 | Impact of Lipids on Intestinal Mucus Transport and Structural Properties | 93.286 | 5,838 |
| Total for Northeastern University | | | | | 107,992 |
| The Broad Institute, Inc. | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928452 | 5310122-55000000519 | High-throughput sequencing of chromatin regulatory elements | 93.172 | -4,469 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930692 | 5310123-55000000519 | High-throughput sequencing of chromatin regulatory elements | 93.172 | 100,341 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930972 | 5610221-55000000694 | There and Back Again: Epigenetic | 93.310 | 281,596 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931601 | 5700171-55000000731 | RNA based diagnostics for rapid pathogen identification and drug resistance | 93.855 | 76,565 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928629 | SUB NO: 5500000428-6030040 -YR 3 | Functional Genomics of Neuroplasticity in Schizophrenia | 93.242 | 183 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930880 | SUB NO: 5500000428-6030040 -YR 4 | Functional Genomics of Neuroplasticity in Schizophrenia | 93.242 | 130,878 |
| Total for The Broad Institute, Inc. | | | | | 585,094 |
| The Scripps Research Institute | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930699 | 5-50914 | Center for HIV/AIDS Vaccine Immunology and Immunogen Discovery (CHAVI-ID) | 93.855 | 240,967 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930700 | PO NO. 5-50915 | CHAV-ID Administrative Supplement – Project 9 | 93.855 | 384,849 |
| Total for The Scripps Research Institute | | | | | 625,816 |
| University of Pennsylvania | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931139 | 565369 | A vascularized three-dimensional biomimetic for islet function and physiology | 93.847 | 54,967 |
| Total for University of Pennsylvania | | | | | 54,967 |
| Mayo Clinic | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6926995 | 5U01A1089859-03 | High-throughput immunophenotypic analyses of humoral responses to West Nile virus | 93.855 | 19,571 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931353 | 5U01A1089859-05 REVISED | Novel Technologies to define functional attributes of T Cells in West Nile virus | 93.855 | 22,769 |
| Total for Mayo Clinic | | | | | 42,340 |

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FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|------------------------------|--|--------|----------------|
| Ohio State University | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6925945 | 60030782-PO RF01288377 | Role of stress-induced reduction in Lactobacillus reuteri on colonic inflammation | 93.213 | 37,969 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928374 | 60040917/PO RF01334401 | Developing a Scientific Workforce Analysis & Modeling Framework | 93.859 | -9,505 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931586 | 60043772-MIT; PO RF01392642 | A model-based examination of behavioral and social science workforce: Improving health outcomes | 93.859 | 37,022 |
| Total for Ohio State University | | | | | 65,486 |
| Northwestern University | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928690 | 60032667 MIT | Ex Vivo Female Reproductive Tract Integration In a 3D Microphysiologic System - Admin Supplement | 93.113 | 14,477 |
| Total for Northwestern University | | | | | 14,477 |
| University of California - San Francisco | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6924455 | 6680SC | Deconstructing and Reconstructing the T Cell Signaling Network | 93.855 | 102,965 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6924456 | 6681SC | Deconstructing and Reconstructing the T Cell Signaling Network | 93.855 | 72,634 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6926089 | 7083SC | A Toolkit for Light-Control of Molecular Processes in Living Cells | 93.859 | 180,391 |
| Total for University of California - San Francisco | | | | | 355,991 |
| University of California - Irvine | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930461 | A1101784/ SUBAWARD 2014-3096 | Targeting iron acquisition in Salmonella with siderophore-based immunization | 93.855 | 84,657 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930943 | SUBAWARD NO. 2014-3129 | Neuron and Glial cellular signatures from normal and diseased iPS cells | 93.853 | 137,102 |
| Total for University of California - Irvine | | | | | 221,759 |
| Praevium Research Inc. | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928842 | AGMT. DTD. 11/26/13 | VCSEL technology for ultrahigh speed OCT retinal and anterior eye imaging | 93.867 | 48,884 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6923290 | SBIR AGMT 2R44CA101067-05 | Ultrahigh Speed and Resolution OCT/OCM Using Broadband Swept VCSEL Technology | 93.394 | 2,526 |
| Total for Praevium Research Inc. | | | | | 51,410 |
| Boston Medical Center | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931135 | AGREEMENT 4292 | Biomarkers and Mechanisms of Paucibacillary and Latent Tuberculosis | 93.855 | 93,385 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|-----------------------------|--|--------|----------------|
| LeafLabs, LLC | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931272 | AGREEMENT DATED 12/2/14 | Electronics and computational hardware for ultra-high channel count electrophysiological recordings of neural activity | 93.242 | 94,288 |
| Trevigen, Inc. | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929288 | AGREEMENT DATED 5/30/12 | SBIR: DNA Repair-on-a-Chip: Spatially Encoded Microwell Arrays | 93.113 | 161,663 |
| Ferro Solutions, Inc. | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928800 | AGREEMENT DATED 8/1/13 | Phase II SBIR: Closed Loop Wireless Optical Neuromodulation Systems | 93.CCC | 410,122 |
| Integrated Laboratory Systems, Inc. | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930834 | AGREEMENT EFFECTIVE 9/26/14 | SBIR CometChip: Development of a high throughput DNA damage assay in hepatocytes | 93.113 | 104,553 |
| Yale University | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928682 | C14A11716(A09395) | High-throughput, multiplexed detection of miRNA biomarkers in single cancer cells | 93.396 | 150,212 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929143 | CA14A11955(A10062) | Analysis of signaling and mechanical cues promoting invasion in melanoma | 93.396 | 13,338 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930877 | CA14A11955(A10063) | Analysis of signaling and mechanical cues promoting invasion in melanoma | 93.396 | 86,555 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930364 | M12A11190(A08872) | Defining Signatures for Immune Responsiveness by Functional Systems Immunology | 93.855 | 233,078 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928778 | M14A11743(A09391) | Modeling human phosphorylation networks through kinome-wide profiling | 93.859 | 350,094 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929149 | SUB U01 CA155758 | Analysis of signaling and mechanical cues promoting invasion in melanoma | 93.396 | 16,481 |
| Battelle-Pacific Northwest Laboratories | | | | | |
| Total for Boston Medical Center | | | | | 93,385 |
| Total for LeafLabs, LLC | | | | | 94,288 |
| Total for Trevigen, Inc. | | | | | 161,663 |
| Total for Ferro Solutions, Inc. | | | | | 410,122 |
| Total for Integrated Laboratory Systems, Inc. | | | | | 104,553 |
| Total for Yale University | | | | | 849,758 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|--------------------------------|--|--------|----------------|
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6925437 | CONTRACT NO. 174694 | Center for Application of Advanced Clinical Proteomic Technologies for Cancer | 93.394 | 5,798 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931329 | CONTRACT NUMBER 248143 | Center for Application of Advanced Clinical Proteomic Technologies for Cancer | 93.394 | 14,581 |
| Burke Medical Research Institute | | | Total for Battelle-Pacific Northwest Laboratories | | 20,379 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931663 | DE3849-01C | Transcranial Direct Current Stimulation and Robotic Training in Chronic Stroke | 93.865 | 57,715 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929733 | DE3849-03C | Transcranial Direct Current Stimulation and Robotic Training in Chronic Stroke | 93.865 | 122,104 |
| Oregon Health and Science University | | | Total for Burke Medical Research Institute | | 179,819 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929538 | GCAEI0303A_MIT | Guiding the Treatment of Anterior Eye Diseases with Optical Coherence Tomography | 93.867 | 42,421 |
| Case Western Reserve University | | | Total for Oregon Health and Science University | | 42,421 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930791 | GRISWOLD RES508442 INVOICE | Magnetic Resonance Fingerprinting (MRF) for Improved High Field MR | 93.286 | 106,458 |
| Tufts University | | | Total for Case Western Reserve University | | 106,458 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929499 | HS311 SUBCONTRACT AGMT | Assessment of Food Intake Using Speech-Understanding Technology | 93.837 | 119,474 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928474 | HS4976 SUBCONTRACT AGMT | Models to Predict Protein Biomaterial Performance | 93.286 | -357 |
| National Bureau of Economic Research, Inc. | | | Total for Tufts University | | 119,117 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929071 | JPAL-33-4135-08 | Intervention to Fight Anemia & Improve Well-Being in a Very Low Income Setting | 93.866 | 9,175 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930308 | MIT-33-4126 | What Does Health Insurance Do? Evidence from the Oregon Health Insurance Lottery | 93.866 | 78,303 |
| Mass. Eye And Ear | | | Total for National Bureau of Economic Research, Inc. | | 87,477 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6918861 | PO F272662/2-R01-DC005755-06A1 | Bilateral Cochlear Implants: Physiology and Psychophysics | 93.173 | -63 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|---------------------------------|--|--------|----------------|
| Rockefeller University | | | Total for Mass. Eye And Ear | | -63 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6924440 | R01DK085713-03 | Modeling human hepatotropic infections in complex tissue organoids | 93.310 | 95,980 |
| J. David Gladstone Institutes | | | Total for Rockefeller University | | 95,980 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928587 | R2216-A | The Epigenetic Landscape of Heart Development | 93.837 | 268,211 |
| Michigan State University | | | Total for J. David Gladstone Institutes | | 268,211 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929800 | RC102953MIT | Center for Innovation in Point of Care Technologies for the Future of Cancer Care | 93.286 | 4,633 |
| Universidad Central del Caribe | | | Total for Michigan State University | | 4,633 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6926522 | SUB UNDER PRIME R01-MH099557-02 | Computational and Functional Characterization of the Molecular Steps in Membran | 93.242 | 34,372 |
| University of Vermont | | | Total for Universidad Central del Caribe | | 34,372 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930705 | SUB51514MIT | Analysis and Characterization of Trauma-Induced Coagulopathy | 93.859 | 229,782 |
| Brown University | | | Total for University of Vermont | | 229,782 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928094 | SUBAWARD 00000624 | Multiscale Modeling of Sickle Cell Anemia: Methods and Validation | 93.839 | 294,607 |
| Harvard Institute for Global Health | | | Total for Brown University | | 294,607 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929735 | SUBAWARD 160502-1073 | Year 3: Harvard University Center for AIDS Research: Defining and Testing Novel Immunogens | 93.855 | 29,163 |
| The Wellcome Trust | | | Total for Harvard Institute for Global Health | | 29,163 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930351 | SUBAWARD 2186-05 | GENCODE: Comprehensive gene annotation for human and mouse | 93.172 | 160,318 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|-------------------------------------|--|--------|----------------|
| Rehabilitation Institute of Chicago | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930094 | SUBAWARD AGREEMENT # 3024 | Recording Neural Activities onto DNA | 93.242 | 895,323 |
| Total for The Wellcome Trust | | | | | 160,318 |
| University of California/Davis | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6926330 | SUBAWARD AGREEMENT NO. 201017009-01 | Mechanisms of how nuclear envelope bridges link nuclei to the cytoskeleton | 93.859 | 23,127 |
| Total for Rehabilitation Institute of Chicago | | | | | 895,323 |
| Forsyth Institute | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931386 | SUBCONTRACT NO. MIT024468-2495 | Cultivation, Nature, Ecology & Pathogenicity of the Uncultivated Oral Microbiome | 93.121 | 69,000 |
| Total for University of California/Davis | | | | | 23,127 |
| University of Connecticut Health Center | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928625 | UCHC6-31827572 | Dynamics and Topology of Phosphotyrosine-SH2 Interaction Networks | 93.396 | -4,574 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928552 | UCHC6-43110843 | Comprehensive Analysis of Functional RNA Elements Encoded in the Human Genome | 93.172 | 64,769 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930288 | UCHC6-53445043 | Dynamics and Topology of Phosphotyrosine-SH2 Interaction Networks | 93.396 | 146,822 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930469 | UCHC6-54577930 | Comprehensive Analysis of Functional RNA Elements Encoded in the Human Genome | 93.172 | 335,575 |
| Total for University of Connecticut Health Center | | | | | 542,593 |
| Vanderbilt University | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928646 | VUMC 36112 | Etiological Studies of Gastric Carcinoma | 93.393 | 15,924 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928293 | VUMC38861 | Year 2 | 93.394 | 218,007 |
| Total for Vanderbilt University | | | | | 233,931 |
| University of Massachusetts Medical Center | | | | | |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6928813 | WA00133058/RFS2014041 | EDAC: Encode Data Analysis Center | 93.172 | -16,536 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6923380 | WA00223268/RFS2013096 | Systems Biology of Insulin Resistance | 93.847 | 339,873 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|-----------------------|--|--------|-------------------|
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6923382 | WA00223269/RFS2013095 | Systems Biology of Insulin Resistance | 93.847 | 325,023 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6923381 | WA00223270/RFS2013097 | Systems Biology of Insulin Resistance | 93.847 | 212,191 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930824 | WA00226494/RFS2015051 | EDAC: Encode Data Analysis Center | 93.172 | 452,681 |
| University of Massachusetts | | | Total for University of Massachusetts Medical Center | | 1,313,233 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6930349 | WA00207399/RFS2015003 | Structural annotation of the human genome | 93.172 | 84,888 |
| Washington University in St. Louis | | | Total for University of Massachusetts | | 84,888 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6929054 | WU-14-171 | Cross-scale interactions between mineral and collagen for tendon-bone attachment | 93.286 | 6,802 |
| Washington University | | | Total for Washington University in St. Louis | | 6,802 |
| DEPARTMENT OF HEALTH & HUMAN SERVICES | 6931688 | WU-15-56 | Cross-scale interactions between mineral and collagen for tendon-bone attachment | 93.286 | 86,008 |
| | | | Total for Washington University | | 86,008 |
| | | | TOTAL for Department of Health & Human Services | | 18,807,515 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|--------------------|---|--------|----------------|
| MISCELLANEOUS FEDERAL GOVT | | | | | |
| Harvard University | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 6923592 | 01-137270 | Mapping Regional Innovation Clusters | 11.303 | 29,969 |
| MISCELLANEOUS FEDERAL GOVT | 6929123 | 105211-5064644 | Testing the National Digital Stewardship Residency (NDSR) Model in Boston, MA | 45.313 | 6,705 |
| | | | Total for Harvard University | | 36,674 |
| Siemens Corporation, Corporate Technology | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 6929661 | 102-01 | Knowledge Representation in Neural Systems | 12.CCC | 242,018 |
| | | | Total for Siemens Corporation, Corporate Technology | | 242,018 |
| Kestrel Institute | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 6922988 | 10-C-7026-MIT | Confinement of New Executable Software Binaries of Uncertain Provenance | 12.CCC | 554,224 |
| | | | Total for Kestrel Institute | | 554,224 |
| Harvard School of Public Health | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 6931110 | 111136.5082827 | Rapid Diagnosis of Frail and Sick Newborns with a Handheld Vital Sign Monitor | 98.001 | 33,959 |
| | | | Total for Harvard School of Public Health | | 33,959 |
| University of New Hampshire | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 6925804 | 12-085 | Gulf of Maine Regional Aquatic Nuisance Species Proposal | 11.417 | 2,947 |
| | | | Total for University of New Hampshire | | 2,947 |
| Duke University | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 6924804 | 12-DHS-1036 | X-Ray Scatter and Phase Imaging for Explosive Detection | 97.065 | 292,072 |
| | | | Total for Duke University | | 292,072 |
| North Pacific Research Board | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 6931400 | 1411 | Influenza in synanthropic gulls: are congregation sites hotspots for viral evolution? | 11.472 | 32,688 |
| | | | Total for North Pacific Research Board | | 32,688 |
| University of Illinois-Urbana Champaign | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 6925791 | 2012-02061-03 | Intercity Passenger Rail | 20.701 | 145,524 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|--------------------|---|--------|----------------|
| Stevens Institute of Technology | | | Total for University of Illinois-Urbana Champaign | | 145,524 |
| MISCELLANEOUS FEDERAL GOVT | 6928557 | 2102272-01 | Center for excellence for Maritime, Island and Extreme/remote Environments Security (CSR) | 97.061 | 11,665 |
| MISCELLANEOUS FEDERAL GOVT | 6928760 | 2102298-01 | Port Resiliency Decision Toolkit and Framework | 97.061 | 104,850 |
| Syracuse University | | | Total for Stevens Institute of Technology | | 116,515 |
| MISCELLANEOUS FEDERAL GOVT | 6928422 | 26150-03225-S01 | Developing an Alternate Reality Game Toolkit for Libraries | 45.312 | 7,961 |
| Boston University | | | Total for Syracuse University | | 7,961 |
| MISCELLANEOUS FEDERAL GOVT | 6927087 | 4500001160 | Establishing Exclusion Criteria and teh Significance of Inclusion for Complex Low-Template DNA Mixtures | 16.560 | 57,591 |
| University of Southern California | | | Total for Boston University | | 57,591 |
| MISCELLANEOUS FEDERAL GOVT | 6929768 | 49245188 | Contributions to the CGM and non-secular motion representation | 15.808 | 22,645 |
| Lincoln Laboratory | | | Total for University of Southern California | | 22,645 |
| MISCELLANEOUS FEDERAL GOVT | 6926777 | 7000213564 | En-Route and Terminal Speed & Altitude Optimization | 20.CCC | 44,550 |
| International Electronics Manufacturing Initiative | | | Total for Lincoln Laboratory | | 44,550 |
| MISCELLANEOUS FEDERAL GOVT | 6930571 | 70NANB14H053-0001 | Integrated Photonics | 11.609 | 160,453 |
| BAE Systems, PLC | | | Total for International Electronics Manufacturing Initiative | | 160,453 |
| MISCELLANEOUS FEDERAL GOVT | 6930167 | 797597 | FINDER Program | 12.CCC | 90,173 |
| ESPACE | | | Total for BAE Systems, PLC | | 90,173 |
| MISCELLANEOUS FEDERAL GOVT | 6928454 | AGMT. DTD. 8/14/13 | IMPACT: Validation of iEPS in Space | 12.CCC | 491,509 |
| | | | Total for ESPACE | | 491,509 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|--------------------|--|--------|----------------|
| Radiation Monitoring Devices | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 6928922 | C14-13 | Photonic Crystal Structures for Transformational Gain in Scintillator Performance | 97.CCC | 123,557 |
| MISCELLANEOUS FEDERAL GOVT | 6928889 | RMD C14-07 | TlBr Spectrometers With Improved Long Term Stability at Room Temperature | 97.CCC | 62,488 |
| Total for Radiation Monitoring Devices | | | | | 186,045 |
| Council on Library and Information Resources | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 6928937 | CON-479 | Closing the Gap: Identifying Needs in Continuing Education for Managing Cultural Heritage Data. | 45.313 | 12,871 |
| Total for Council on Library and Information Resources | | | | | 12,871 |
| Massachusetts Department of Transportation | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 6928559 | CONTRACT #81074 | Kendall Square Value Pricing Pilot Project | 20.205 | 223,573 |
| Total for Massachusetts Department of Transportation | | | | | 223,573 |
| Colorado State University | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 6928840 | G-9870-1 | Estimating the Effects of Changing Climate on Fires and Consequences for U.S. Air Quality, Using a Set of Global and Regional Climate Models | 15.232 | 11,855 |
| Total for Colorado State University | | | | | 11,855 |
| Missouri Botanical Garden | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 6931485 | MLS0564MI | IMAGINE: Innovative Modeling Across the Garden to Investigate Neighborhood Ecology | 45.301 | 28,955 |
| Total for Missouri Botanical Garden | | | | | 28,955 |
| Consensus Building Institute | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 6927248 | NA09NOS4190153 | NERRS New England Climate Adaptation Project | 11.419 | 10,742 |
| Total for Consensus Building Institute | | | | | 10,742 |
| BBN Technologies Corporation | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 6927089 | PO #9500010544 | Integrated Cognitive Neuroscience Architectures for Understanding Sensemaking (ICATUS) | 12.CCC | -110 |
| MISCELLANEOUS FEDERAL GOVT | 6930273 | PO #9500011262 | Babelon | 12.CCC | 258,644 |
| Total for BBN Technologies Corporation | | | | | 258,534 |
| L3 Communications | | | | | |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|----------------------|---|--------|------------------|
| MISCELLANEOUS FEDERAL GOVT | 6921745 | SUBCONTRACT #M152981 | Advanced Technology Demonstration for Rapidly Re-locatable Shielded Nuclear Alarm Resolution (SNAR) Prototype | 97.CCC | -2,882 |
| Georgia Institute of Technology | | | | | -2,882 |
| MISCELLANEOUS FEDERAL GOVT | 6927178 | SUBCONTRACT RC051-S1 | Optimized Resources and Architectures for Quantum Algorithms (ORAQL) | 12.CCC | -54,257 |
| Veterans Affairs Maryland Health Care System, VAMHCS | | | | | -54,257 |
| MISCELLANEOUS FEDERAL GOVT | 6929113 | VA245-14-C-0039 | MIT Adaptive Games and Development of Alpha-Prototype of the MIT-Skywalker | 64.CCC | 1,018 |
| University of Maryland - College Park | | | | | 1,018 |
| MISCELLANEOUS FEDERAL GOVT | 6924989 | Z987501 | Distributed Mechanisms for Determining NAS-Wide Service Level Expectations | 20.RD | 125,700 |
| MISCELLANEOUS FEDERAL GOVT | 6924992 | Z987701 | Analysis and Modeling of Passenger Delay in the NAS | 20.RD | 66,820 |
| MISCELLANEOUS FEDERAL GOVT | 6929500 | Z988401 | ADS-B AIRB with Alerting Research (Delivery order No. 10) | 20.CCC | 20,466 |
| MISCELLANEOUS FEDERAL GOVT | 6925073 | Z990002 | Wake Turbulence Analysis and Research to Study NextGen Operations | 20.RD | 100,049 |
| Total for University of Maryland - College Park | | | | | 313,035 |
| TOTAL for Miscellaneous Federal Govt | | | | | 3,320,991 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|--------------------|--|--------|----------------|
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | | | | | |
| Brown University | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930189 | 00000677 | SSERVI: Environment and Evolution of Exploration Destinations: Science and Engineering Synergism | 43.001 | 129,623 |
| Total for Brown University | | | | | 129,623 |
| University Space Research Assoc. | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6928949 | 09960-13 | Augmentation of Sensorimotor Adaptability Using Stochastic Resonance Technologies | 43.001 | 9,376 |
| Total for University Space Research Assoc. | | | | | 9,376 |
| Applied Physics Lab of Johns Hopkins | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927060 | 111556 | Are Saturn tori variable? | 43.CCC | 38,614 |
| Total for Applied Physics Lab of Johns Hopkins | | | | | 38,614 |
| CalTech - Jet Propulsion Lab | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6899758 | 1283622 | Voyager Interstellar Mission (VIM) Plasma Science | 43.CCC | 347,659 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6928417 | 1487122 | Multi-model sea-ice kernels for improving estimates of modeled sea-ice uncertainty: Preliminary applications to insolation effects and to sea-ice dynamics | 43.CCC | 1,854 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6931070 | 1516097 | Wearable Interface for Natural Gesture Control and Tele-Operation of Robotic Systems | 43.CCC | 35,116 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6931134 | 1516434 | Exoplanet Radio Data Analysis | 43.CCC | 4,393 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6931786 | 1524876 | JPL Innovation Foundry | 43.CCC | 3,198 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930657 | PO NO. 1511605 | Mars Oxygen ISRU Experiment (MOXIE): Phase A Project Science Group Meeting | 43.CCC | 14,430 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927192 | RSA 1472797 | The Eccentric Exoplanets: A Survey of Atmospheric heating and Variability | 43.CCC | -718 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927224 | RSA 1474090 | Critical Support Data for Seasonal Change in Pluto's Atmosphere | 43.CCC | 4,030 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929376 | RSA 1499601 | Critical Support Data for Seasonal Change in Pluto's Atmosphere | 43.CCC | 5,332 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929298 | RSA 1499620 | Measuring the masses of the shortest-period planets | 43.CCC | 5,461 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|-------------------------|--|--------|------------------|
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929419 | RSA 1499636 | The First Orbital Phase Curve of a Rocky Exoplanet | 43.CCC | 2,869 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930629 | RSA 1511192 | KECK 2014B Critical Support Data for Seasonal Change in Pluto's Atmosphere | 43.CCC | 11,588 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6931007 | RSA 1515125 | Novel Readout of Superconducting Nanowire Single Photon Detectors | 43.CCC | 42,466 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6924522 | RSA NO. 1439663 | The first detection of the thermal emission from a solid exoplanet - Spitzer Project PID 80231 | 43.CCC | 1,950 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6928843 | RSA NO. 1492486 | Free Space Optical Communications for Small Satellites | 43.001 | 71,789 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930202 | RSA NO. 1501510 | Exoplanet Atmospheres in High Definition: 3D Eclipse Mapping of HD 209458b and HD 189733b | 43.CCC | 27,986 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930187 | RSA NO. 1501658 | Consortium on Ultracold Atoms in Space | 43.CCC | 2,535 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6923676 | SUBCONTRACT 1428190 | Estimating the Circulation and Climate of the Ocean for CLIVAR | 43.CCC | 422,720 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6925312 | SUBCONTRACT 1449788 | Benchmarking Thermolysis and Pyrolysis of Organic Matter on the SAM Instrument Suite | 43.CCC | 205,256 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6925531 | SUBCONTRACT 1453629 | Planning for MIT Comet Magnetization Investigations | 43.CCC | 212,716 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930713 | SUBCONTRACT NO. 1510842 | Soil Moisture Science and Product Development | 43.CCC | 147,148 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6931399 | SUBCONTRACT NO. 1517907 | The Mars Oxygen ISRU Experiment (MOXIE) | 43.CCC | 136,243 |
| Total for CalTech - Jet Propulsion Lab | | | | | 1,706,020 |
| Harvard University | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927184 | 130759-5041928 | Exploring Cryogenian Biological and Environmental Change in Mongolia | 43.001 | 34,131 |
| Total for Harvard University | | | | | 34,131 |
| Scientific Systems Company, Incorporated | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6931010 | 1601-MIT | Implementation & Flight Testing of IMPACT System for Autonomous ISR | 43.CCC | 4,483 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6928348 | SUBCONTRACT #1584-MIT | Integrated Motion Planning and Autonomous Control Technology | 43.CCC | 676 |
| Total for Scientific Systems Company, Incorporated | | | | | 5,159 |
| California Institute of Technology | | | | | |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|------------------------------|---|--------|----------------|
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6926950 | 21B-1092906 | Determining the biological function of hopanoids in <i>Rhodopseudomonas palustris</i> | 43.001 | 19,380 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927547 | 44A-1093689 | Analysis of NuSTAR Observations of Sgr A* and the Galactic Center | 43.001 | 41,518 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6922881 | 65P-1089493 | High-Resolution Mars Polar Stratigraphy and Paleoclimate Proxies | 43.CCC | 15,181 |
| Southwest Research Institute | | | | | 76,079 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6893453 | 299433Q/SUB UNDER NASW-02008 | New Horizon Science Team Member 05310-SOW-02 Rev O Chg O | 43.CCC | 92,382 |
| University of Michigan | | | | | 92,382 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6924108 | 3001889485 | GeoMACH: Geometry fo MDAO of Aircraft Configurations with High fidelity | 43.002 | -2,212 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929673 | 3002970419 | Scalable Multidelity Design Optimization: Next Generation Aircraft and their Impact on the Air Transportation System | 43.002 | 147,857 |
| University of Southern California | | | | | 145,645 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927488 | 34714188 | Land Information System for SMAP Tier-1 and AirMOSS Earth Venture-1 Decadal Survey Missions | 43.001 | 57,979 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6926431 | 38686495/PO 10178888 | Airborne Microwave Observatory of Subcanopy and Subsurface (AirMOSS) | 43.CCC | 142,012 |
| Purdue University | | | | | 199,991 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929534 | 4103-60255 | Regional and Global Climate and Societal Impacts of Land-Use and Land-Cover Change in Northern Eurasia: A Synthesis Study Using Remote Sensing Data and An Integrated Global System Model | 43.001 | 51,051 |
| Pennsylvania State University | | | | | 51,051 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6928017 | 4855-MIT-NASA-180G | Carbon Biosignatures of Early Ecosystems: Picomolar Scale Compound-Specific Isotope Analyses (Pico-CSIA) | 43.001 | 15,311 |
| Stanford University | | | | | 15,311 |

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|--|----------------|---|---|--------|---------------|
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6931197 | 60777964-112312(MIT) | Spacecraft/Rover Hybrids for the Exploration of Small Solar System Bodies | 43.001 | 5,501 |
| Protolnnovations, LLC | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930269 | AGMT DTD JUNE 20, 2014 UNDER PRIME NNX14CA62P | STTR: Advanced Algorithms and Controls for Superior Robotic All-Terrain Mobility | 43.CCC | 68,000 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6931960 | AGRMENT EFFECTIVE 5-1-15 | Advanced Algorithms and Controls for Superior Robotic All-Terrain Mobility (Phase 2) | 43.CCC | 4,881 |
| Total for Protolnnovations, LLC | | | | | 72,881 |
| ESPACE | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6928455 | AGMT. DTD. 8/14/13 | PETA Phase 3 | 43.CCC | 289 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930807 | AGREEMENT EFFECTIVE 3/26/14 | Precision Electropray Thruster Assembly (PETA) Phase 3 - BaseLine | 43.CCC | 54,484 |
| Total for ESPACE | | | | | 54,773 |
| Smithsonian Inst. - Astrophysical Observatory | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6925474 | AR2-13009B | A SERENDIPITOUS 695-KS HETG OBSERVATION OF THE CIRCINUS GALAXY: THE DEEPEST EVER STUDY OF A TYPE-2 AGN (Chandra 13700844) | 43.CCC | 1,853 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6931555 | AR5-16003X | The Evolution of Disk Winds with X-ray Spectral States in Neutron Star Low Mass X-ray Binaries (Chandra 16400627) | 43.001 | 1,276 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6928006 | G03-14033X | Precise Localization of Transient Low-Mass X-ray Binaries (Chandra 14400273) | 43.CCC | 65 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929290 | G03-14120B | Probing The Causes of the High/Low Jet Power Dichotomy in AGN Jets with Chandra and HST (Chandra 14700792) | 43.001 | 13,548 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929558 | G04-15007X | The eye of the hurricane. Exploring the innermost wind region of the massive star QV Nor | 43.001 | 9,191 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929382 | G04-15032X | Precise Localization of Transient Low-Mass X-ray Binaries | 43.001 | 15,755 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930578 | G04-15037X | LETGS Spectroscopy of the Ultracompact Binary 4U 1626-67 (Chandra 15400308) | 43.001 | 17,270 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930733 | G04-15040A | SS433 Jet Formation | 43.001 | 3,715 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929699 | G04-15048X | The cooling neutron star in the super-Eddington accretor XTE J1701-462 (Chandra 15400856) | 43.001 | 41,751 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|--------------------|---|--------|-------------|
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929736 | G04-15091B | Monitoring the Tidal Disruption of the Gas Cloud G2 As It Encounters Sgr A* (Chandra 15620853) | 43.001 | 16,006 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6923118 | GO1-12063X | Validating Neutron Star Radius Measurements (Proposal No. 12400796) | 43.CCC | 1,329 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6923397 | GO1-12165X | The Outer Limits of Clusters with Chandra and Suzaku (Proposal No. 12800572) | 43.CCC | 16,622 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6924743 | GO2-13006B | Cosmology and Cluster Evolution from the 80 Most Massive Clusters in 2000 deg.2 from the South Pole Telescope Survey (Chandra 13800883) | 43.CCC | 13,118 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6925681 | GO2-13029X | Close binary populations in metal-rich globular clusters (Chandra 13300385) | 43.CCC | 7,243 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6925654 | GO2-13034X | A Further Drop into Quiescence by the Neutron Star and Possible Hierarchical Triple 4U2129+47 (Chandra 13400103) | 43.CCC | 4,429 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927223 | GO2-13045B | Transient LMXBs in Globular Clusters: More Numerous than We Thought? (Chandra 13400312) | 43.CCC | 8,451 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6924744 | GO2-13052X | Quasi-persistent neutron-star X-ray binaries in quiescence (Chandra 13400639) | 43.CCC | 2,776 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927465 | GO2-13060X | The cooling neutron star in the super-Eddington accretor XTE J1701-462 (Chandra 13400822) | 43.001 | 17,963 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6926392 | GO2-13061X | The shortest orbital period black-hole X-ray binary in quiescence (Chandra 13400846) | 43.CCC | 3,881 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6925445 | GO2-13110A | Chandra HETG Ultra-deep Gratings Spectroscopy of Sgr A* (CHUGSS) (Chandra 13620807) | 43.CCC | 47,545 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6925446 | GO2-13152X | To The Outer Limits of Clusters with Chandra and Suzaku (Chandra 13800569) | 43.CCC | 32,530 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927408 | GO2-13162A | Probing the Nature and Role of X-ray Emission in HII Regions with Chandra (Chandra 13900353) | 43.CCC | 8,011 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927863 | GO3-14003A | Wolf-Rayet Winds at High Spectral Resolution (Chandra 14200176) | 43.CCC | 12,369 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927154 | GO3-14031X | Crust cooling of accretion heated neutron stars (Chandra 14400215) | 43.CCC | 7,352 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927864 | GO3-14032B | Transient LMXBs in Globular Clusters (Chandra 14400238) | 43.CCC | 6,783 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927553 | GO3-14034B | Observations of a cooling neutron star crust in Terzan 5 (Chandra 14400307) | 43.CCC | 618 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927479 | GO3-14080X | Studying Particle Acceleration and Ejecta in Northwest Rim of the Supernova Remnant RCW 86 with Chandra (Chandra 14500895) | 43.CCC | 788 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6926869 | GO3-14090B | ARP143: Collisional Ring Galaxy (Proposal No. 14620150) | 43.CCC | 7,797 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|--------------------|---|--------|------------------|
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927390 | GO3-14092B | Galaxies in Collision: NGC 2207 & IC 2163 (Chandra 14620268) | 43.CCC | 1,790 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6928578 | GO3-14099X | Monitoring the Tidal Disruption of a Gas Cloud Approaching Sgr A* (Chandra 14620924) | 43.CCC | 13,757 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927467 | GO3-14132X | To the Outer Limits of Clusters with Chandra and Suzaku (Chandra 14800401) | 43.001 | 24,836 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6931768 | GO5-16031B | Transient LMXBs in Globular Clusters (Proposal No.16400153) | 43.001 | 725 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6931464 | GO5-16080X | Galaxies in Collision (ARP 273) | 43.001 | 1,276 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6931765 | GO5-16088X | S364 IN THE OLD OPEN CLUSTER M67: EXOPLANET HOST OR ACTIVE BINARY? (Chandra 16620871) | 43.001 | 725 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6925506 | SV2-82011 | Participation in the Stability Issues and Considerations for GGOS Core Sites Project | 43.CCC | 18,972 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6926645 | SV2-82023 | ACIS Science Support for the Chandra Program | 43.CCC | 399,795 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6895253 | SV3-73016 | Support of the Chandra X-Ray Center (CXC) | 43.CCC | 3,271,163 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927059 | SV3-83001 | MIT Participation in Phase C/D activities to prepare the Faraday Cup (FCup) for the Deep Space Climate Observatory (DSCOVR) | 43.CCC | 51,079 |
| University of Chicago | | | | | 4,104,151 |
| Exploring the Diversity of Exoplanet Atmospheres Using Ground-Based Transit Spectroscopy | | | | | 31,434 |
| Total for University of Chicago | | | | | 31,434 |
| Baylor College of Medicine | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930332 | HFP03801 | Customized Refresher and Just-In-Time Training for Long-Duration Spaceflight Crews | 43.002 | 179,435 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6928521 | SA03401 | Countermeasures to Reduce Sensorimotor Impairment and Space Motion Sickness Resulting from Altered Gravity Levels | 43.CCC | 295,819 |
| Total for Baylor College of Medicine | | | | | 475,253 |
| Space Telescope Science Institute | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929649 | HST-AR-13238.04-A | Resolving Galaxy Cluster Substructure with Gravitational Lensing Flexion | 43.CCC | 13,812 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6928929 | HST-AR-13246.01-A | The nucleosynthetic origins and chemical evolution of phosphorus in the early universe (HST-AR-13246) | 43.CCC | 28,819 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|---------------------------|---|--------|----------------|
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6925442 | HST-GO-12254-10-A | The Origins of Carbon-Enhanced Metal-Poor Stars (HST GO-12554.10) | 43.CCC | 1,495 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6925405 | HST-GO-12268-11-A | Production of the Heavy Elements in the Universe (HST GO-12268.11) | 43.CCC | 2,726 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6925695 | HST-GO-12746.01-A | Close binary populations in metal-rich globular clusters (HST-GO-12746-A) | 43.CCC | 24,022 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929525 | HST-GO-12976.06-A | The Most Complete Template for r-process Nucleosynthesis beyond the Solar System (HST-GO-12976) | 43.CCC | 6,135 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929647 | HST-GO-12992.01-A | Are Young Stars Condensing Out of the Rapidly-Cooling Intracluster Medium? (HST-GO-12992) | 43.CCC | 987 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929424 | HST-GO-13021.04-A | Revealing the Diversity of Super-Earth Atmospheres | 43.CCC | 13,623 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6928416 | HST-GO-13031.08-A | Testing Collisional Grinding in the Kuiper Belt | 43.CCC | 4,752 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6927925 | HST-GO-13102.04-A | Zooming in on the Starburst at the Core of the Phoenix Cluster (HST-GO-13102) | 43.CCC | 1,782 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929562 | HST-GO-13180.007 | Search for a Transit of Alpha Centauri Bb, the first Earth Mass | 43.CCC | 58,094 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6928928 | HST-GO-13303.01-A | The Structure of MgII Absorbing Galaxies at z=2-5: Linking CGM Physics and Stellar Morphology During Galaxy Assembly (HST-GO-13303) | 43.CCC | 123,098 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929020 | HST-GO-13380.01-A | Probing Black Hole Disk Atmospheres with EPIC and RGS Observations of 4U 1957+11 (HST 13380) | 43.CCC | 6,364 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930667 | HST-GO-13456.002A | Searching for 300,000 Degree Gas in the Core of the Phoenix Cluster with HST-COS (HST 13456) | 43.CCC | 4,120 |
| Massachusetts Institute of Technology | | | | | 289,830 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6923680 | NNX11AB32G SUBAWARD NO. Z | Lunar Paleomagnetism | 43.CCC | 28,254 |
| Honeywell | | | | | 28,254 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930862 | NON11042 PO #4205965818 | Category-theoretic Approaches for the Analysis of Distributed Systems | 43.CCC | 83,566 |
| Lowell Observatory | | | | | 83,566 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6666200 | PO#78250/USRA 8500-98-003 | SOFIA Instrument Development and Operation | 43.CCC | 65,352 |
| Total for Space Telescope Science Institute | | | | | 289,830 |
| Total for Massachusetts Institute of Technology | | | | | 28,254 |
| Total for Honeywell | | | | | 83,566 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|---|--|--------|----------------|
| University of Arizona | | | | | 65,352 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6924918 | PURCHASE ORDER 6473 | OSIRIS-REX Near-Earth Asteroid Sample Return | 43.CCC | 27,181 |
| LongWave Photonics LLC | | | | | 27,181 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930341 | SBIR AGMT UNDER NNX14CP54P | Terahertz quantum cascade laser local oscillator | 43.CCC | 26,197 |
| Faraday Technology, Inc | | | | | 26,197 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930222 | SBIR AGREEMENT UNDER NNX14CC53P | Phase I SBIR: Microfluidic system for CO2 reduction to hydrocarbons in microgravity | 43.CCC | 34,200 |
| Draper Laboratory Incorporated | | | | | 34,200 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6926830 | SC001-00000000696 | Variable Vector Countermeasure Suit (V2Suit) for Space Habitation and Exploration | 43.009 | 55,165 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6925106 | SC001-592 | Research Opportunities in Space and Earth Sciences (ROSES): Climate Extremes and Landscape Hazards: An interdisciplinary Study of Change | 43.001 | 65,189 |
| Phoenix Integration | | | | | 120,354 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6930247 | STTR RESEARCH AGREEMENT EFFECTIVE 6/19/2014 | Framework for Autonomous Optimization | 43.CCC | 39,977 |
| Washington University in St. Louis | | | | | 39,977 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6925859 | SUB WU-12-250 PO 2917814T | Path Planning and Retrieval of Terrain Properties Using Curiosity's Mobility System as a Terramechanics Virtual Instrument | 43.CCC | 55,899 |
| University of Alabama in Huntsville | | | | | 55,899 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929881 | SUB2012-055 | Informal representation and team decision-making in complex engineering systems | 43.008 | 6,296 |
| Total for University of Alabama in Huntsville | | | | | 6,296 |

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FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|-------------------------------|--|--------|------------------|
| Northeastern University | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6929056 | SUBAWARD #505014 | NRI-Small: Manipulating Flexible Materials Using Sparse Coding | 43.001 | 75,480 |
| Total for Northeastern University | | | | | 75,480 |
| University of California - Irvine | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6928803 | SUBAWARD NO. 2013-2981 | Ice-Shelf Melting in Antarctica and impact on Glacier Dynamics | 43.001 | 84,752 |
| Total for University of California - Irvine | | | | | 84,752 |
| Aurora Flight Sciences Corporation | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6931044 | SUBCONTRACT AFS14-1207 | SBIR Phase II: Enhanced Dynamic Load Sensor for ISS (EDLS-ISS) | 43.CCC | 114,215 |
| Total for Aurora Flight Sciences Corporation | | | | | 114,215 |
| University of California | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6921633 | SUBCONTRACT NO. 2090-S-MA838 | DAWN A Journey to the Beginning of teh Solar System - Phase E | 43.CCC | 114,871 |
| Total for University of California | | | | | 114,871 |
| Carnegie Institution of Washington | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6920454 | SUBCONTRACT NO. DTM-3250-1018 | Messenger Discovery Mission to Mercury | 43.CCC | 128,265 |
| Total for Carnegie Institution of Washington | | | | | 128,265 |
| University of Minnesota | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 6917008 | X5336545105 | Radiation Belt Storm Probe EFW Project | 43.CCC | 117,732 |
| Total for University of Minnesota | | | | | 117,732 |
| TOTAL for National Aeronautics and Space Administration | | | | | 8,659,796 |

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Federal Research Support - Passthrough - On Campus
FY 2015 Expenditures by Prime Sponsor and Sponsor**

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|-------------------------------|---|--------|------------------|
| NATIONAL SCIENCE FOUNDATION | | | | | |
| University of California - Berkeley | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6921266 | 00006900 | Modeling Analysis and Control of Distributed Sensor Networks for Cyber Physical Systems | 47.070 | 129,877 |
| NATIONAL SCIENCE FOUNDATION | 6921230 | 00006934 | NSEC: Center for Scalable & Integrated Nano Manufacturing (SINAM) | 47.041 | -1,138 |
| NATIONAL SCIENCE FOUNDATION | 6923305 | 00007444 | Center for Energy Efficient Electronics Science (E3S) | 47.041 | 1,264,695 |
| NATIONAL SCIENCE FOUNDATION | 6923638 | 00007481 | A Study of Fidelity in Systems Level Design Modeling for Sustainable Energy Systems | 47.041 | 17,931 |
| NATIONAL SCIENCE FOUNDATION | 6927464 | 00008052 | R&D toward SuperCDMS at SNOLAB | 47.041 | 16,240 |
| NATIONAL SCIENCE FOUNDATION | 6931200 | 00008648 | HERA: Illuminating Our Early Universe | 47.049 | 66,176 |
| NATIONAL SCIENCE FOUNDATION | 6914148 | SA5284-11210 | SynBERC: Synthetic Biology Engineering Research Center | 47.041 | 1,051,967 |
| NATIONAL SCIENCE FOUNDATION | 6929157 | SUBAWARD 00008317/MCB-1330914 | Synthetic biology of yeast | 47.074 | 145,225 |
| Total for University of California - Berkeley | | | | | 2,690,972 |
| Columbia University | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6931173 | 1(GG988891) PO G05323 | CNH: Competing Demands and Future Vulnerability of Groundwater: Drinking Water Quality and Food Security in Arsenic-Impacted South and Southeast Asia | 47.050 | 27,936 |
| Total for Columbia University | | | | | 27,936 |
| University of Massachusetts - Amherst | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6924482 | 11-006642 E 00 | Metrology and Process Modeling for Roll-to-Roll Patterned Polymer Manufacturing | 47.041 | 138,344 |
| Total for University of Massachusetts - Amherst | | | | | 138,344 |
| Carnegie-Mellon University | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6930825 | 1122183-333057 | CIF21: DIBBS: Building a Scalable Infrastructure for Data-Driven Discovery and Innovation in Education | 47.070 | 96,833 |
| Total for Carnegie-Mellon University | | | | | 96,833 |
| SimBiotic Software | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6926892 | 1227245 | DIP: Using Dynamic Models to Assess Higher-Order Thinking Skills in Biology | 47.080 | 90,247 |
| Total for SimBiotic Software | | | | | 90,247 |
| University of Wisconsin | | | | | |

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FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|-----------------------------------|---|--------|------------------|
| NATIONAL SCIENCE FOUNDATION | 6926610 | 123405535 | Data Handling and Analysis Infrastructure for Advanced LIGO and Beyond | 47.049 | 90,868 |
| Harvard University | | | | | 90,868 |
| NATIONAL SCIENCE FOUNDATION | 6929129 | 123826-5056263 | Center for Integrated Quantum Materials | 47.049 | 941,534 |
| Arizona State University | | | | | 941,534 |
| NATIONAL SCIENCE FOUNDATION | 6929429 | 14-374 | FESD Type 1: The Dynamics of Earth System Oxygenation | 47.050 | 189,803 |
| NATIONAL SCIENCE FOUNDATION | 6929195 | SUBAWARD NO. 12-725 | ERC for Quantum Energy and Sustainable Solar Technologies: QUESST | 47.041 | 405,283 |
| NATIONAL SCIENCE FOUNDATION | 6926052 | SUBAWARD NO. 12-920 | EDGES-2: Detecting First Light and Reionization Through the Global 21cm Signature | 47.041 | 68,918 |
| New York University School of Medicine | | | | | 664,004 |
| NATIONAL SCIENCE FOUNDATION | 6930277 | 14-AO-00-00315301: PROJECT 103733 | CRCNS: Computational Approaches to Uncover Neural Representation of Population Codes in Rodent Hippocampal-Cortical Circuits. | 47.070 | 96,360 |
| University of Maryland | | | | | 96,360 |
| NATIONAL SCIENCE FOUNDATION | 6931090 | 17283-Z4390002 | Creating Opportunities for Adaption Based of Population in Urban Landscape for Sustainable Built Environments (PULSE) | 47.041 | 81,640 |
| California Institute of Technology | | | | | 81,640 |
| NATIONAL SCIENCE FOUNDATION | 6924765 | 19-1091542 | EFRI: MKS: Notch Signaling in Colon Cancer Stem Cells | 47.074 | 76,958 |
| NATIONAL SCIENCE FOUNDATION | 6929097 | 68D-1094591 | Powering the Planet: A Chemical Bonding Center in the Direct Conversion of Sunlight into Chemical Fuel | 47.049 | 350,243 |
| NATIONAL SCIENCE FOUNDATION | 6929478 | SUBAWARD NO. 75-1086390 | LIGO Operations | 47.049 | 3,537,327 |
| NATIONAL SCIENCE FOUNDATION | 6922569 | SUBAWARD NO. 75ADV-1085563 | Advanced LIGO | 47.049 | 449,313 |
| University of Illinois-Urbana Champaign | | | | | 4,413,841 |
| NATIONAL SCIENCE FOUNDATION | 6931375 | 2014-05135-01 | Atomic Beam Source (ABS) Development | 47.049 | 74,903 |

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FY 2015 Expenditures by Prime Sponsor and Sponsor**

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|----------------------------|--|--------|----------------|
| Massachusetts General Hospital | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6928836 | 223092 | Imaging the elastic properties of cells in 3D environment | 47.041 | 15,477 |
| NATIONAL SCIENCE FOUNDATION | 2388637 | BILLING AGREEMENT - 217685 | Enabling medical Device Interoperability for the Integrated Clinical Environment | 47.070 | -6,000 |
| Total for University of Illinois-Urbana Champaign | | | | | 74,903 |
| Drexel University | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6924175 | 235660 | ARRA - MRI-R2: Development of a Common Platform for Unifying Humanoids Research | 47.082 | 15,563 |
| Total for Massachusetts General Hospital | | | | | 9,477 |
| Brooklyn College of the City University of New York | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6926992 | 40C68A | Learning Mathematics of the City in the City | 47.076 | 41,873 |
| Total for Drexel University | | | | | 15,563 |
| Purdue University | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6928397 | 4101-51804 | Network for Computational Nanotechnology (NCN) | 47.041 | 259,837 |
| NATIONAL SCIENCE FOUNDATION | 6924355 | AGMT. NO. 4101-43959 | A Scalable Nanomanufacturing Machine for Parallel Nanolithography and Parallel Fabrication of Nanscale Devices | 47.041 | 5,899 |
| NATIONAL SCIENCE FOUNDATION | 6924018 | SUBAWARD #4101-38045 | Emerging Frontiers of Science of Information | 47.070 | 691,359 |
| NATIONAL SCIENCE FOUNDATION | 6924611 | SUBAWARD #4101-44669 | Terahertz Field Control for Signal Processing and Communication | 47.041 | -3,147 |
| Total for Purdue University | | | | | 953,948 |
| Pennsylvania State University | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6924565 | 4482-MIT-NSF-0437 | Ionic Electroactive Polymer Actuators with Tailored NanoStructure Morphology | 47.041 | 14,891 |
| Total for Pennsylvania State University | | | | | 14,891 |
| Boston University | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6922469 | 4500000225 | EFRI-SEED Framework for advanced sustainable building design. Smart Micro-grid enabled buildings interacting with utility-side-of-the-meter electricity markets. | 47.041 | 217,352 |
| NATIONAL SCIENCE FOUNDATION | 6927635 | 4500001216 | Cognitive Rhythms Collaborative: A Discovery Network | 47.049 | 195,096 |
| NATIONAL SCIENCE FOUNDATION | 6923882 | GC208258NGA | Cognitive Rhythms Collaborative: A Discovery Network | 47.049 | 13,958 |

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| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|---------------------------------------|---|--------|------------------|
| NATIONAL SCIENCE FOUNDATION | 6921761 | LTR. AWARD GC-208001NGA 4500000224 | SLC Center: CELEST: A Center for Learning in Education Science + Technology | 47.075 | 59,497 |
| Northeastern University | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6928496 | 502076-78050A | EFRI-ODISSEI: Origami and Assembly Techniques for Human-Tissue-Engineering (OATH) | 47.041 | 109,843 |
| NATIONAL SCIENCE FOUNDATION | 6928471 | 502076-78050B | EFRI-ODISSEI: Origami and Assembly Techniques for Human-Tissue-Engineering (OATH) | 47.041 | 125,935 |
| NATIONAL SCIENCE FOUNDATION | 6924880 | SUB#501936, PO#P1406752 | Instantaneous Passive and Active Detection, Localization and Monitoring of Marine Mammals over Long Ranges with High-Resolution Towed Array Measurements | 47.050 | -4,821 |
| University of Pennsylvania | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6928993 | 557757 | Center of Excellence for Materials Research and Innovation (CEMRI) | 47.049 | 187,575 |
| University of Washington | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6926679 | 724454 | NSF Engineering Research Center for Sensorimotor Neural Laboratory of Electronics | 47.041 | 861,284 |
| NATIONAL SCIENCE FOUNDATION | 6928749 | SUBAWARD NO. 754586 | Reliable Quantum Communication and Computation in the Presence of Noise | 47.070 | 235,726 |
| NATIONAL SCIENCE FOUNDATION | 6926728 | SUBCONTRACT NO. 744910 | Center for Enabling New Technologies through Catalysis (CENTC) Phase II Renewal | 47.049 | 125,466 |
| Chromatation Partners | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6928007 | AGMT. DTD. 7/9/13 | Ultra-Compact Photonic Crystal Based Spectrometer | 47.041 | -2,715 |
| NEROC | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6918926 | AST-0821321 | MRI: Acquisition of an Archive for the Murchison Widefield Array | 47.049 | 26,524 |
| NATIONAL SCIENCE FOUNDATION | 6924648 | AST-1126433 | MRI: Development of an ALMA Beamformer for Ultra High Resolution VLBI and High Frequency Phased Array Science | 47.049 | 538,506 |
| Total for Boston University | | | | | |
| | | | | | 485,902 |
| Total for Northeastern University | | | | | |
| | | | | | 230,957 |
| Total for University of Pennsylvania | | | | | |
| | | | | | 187,575 |
| Total for University of Washington | | | | | |
| | | | | | 1,222,476 |
| Total for Chromatation Partners | | | | | |
| | | | | | -2,715 |

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FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|---------------------------|---|--------|------------------|
| NATIONAL SCIENCE FOUNDATION | 6926369 | AST-1207704 | Collaborative Research: Building an Event Horizon Telescope: (Sub)millimeter VLBI from the South Pole Telescope | 47.049 | 188,046 |
| NATIONAL SCIENCE FOUNDATION | 6926388 | AST-1211539 | Spatially Resolving the Black Hole Event Horizon: (sub mm VLBI of SgrA* and M87 | 47.049 | 82,241 |
| NATIONAL SCIENCE FOUNDATION | 6931590 | AST-1310896 | Building the Event Horizon Telescope: Observing Black Holes with Schwarzschild Radius Resolution | 47.049 | 485,521 |
| University of Chicago | | | Total for NEROC | | 1,320,837 |
| NATIONAL SCIENCE FOUNDATION | 6928942 | FP055660 | Scaling directed self-assembly of block copolymers for sub 10-nm manufacturing | 47.049 | 116,131 |
| Montana State University | | | Total for University of Chicago | | 116,131 |
| NATIONAL SCIENCE FOUNDATION | 6929216 | G-111-14-W4576 | Engineering Synthetic Symbiosis between Plant and Bacteria to Deliver Nitrogen to Crops | 47.074 | 329,976 |
| University of Minnesota | | | Total for Montana State University | | 329,976 |
| NATIONAL SCIENCE FOUNDATION | 6926981 | H002341903 | Data Net Full Proposal: Terra Populus: A Global Population/Environment Data Network (Subcontract to MIT) | 47.080 | 18,458 |
| Missouri Botanical Garden | | | Total for University of Minnesota | | 18,458 |
| NATIONAL SCIENCE FOUNDATION | 6927023 | NSF05702MIT | A Full Scale Development Proposal Informal Community Science Investigators (iCS): Next Generation Engagement for Informal Science Instruction | 47.076 | 186,866 |
| UNAVCO | | | Total for Missouri Botanical Garden | | 186,866 |
| NATIONAL SCIENCE FOUNDATION | 6915864 | PO #02676 | Geo Earth Scope Geochronology | 47.000 | 33,990 |
| NATIONAL SCIENCE FOUNDATION | 6929222 | S13-EAR1261833-S4 | GAGE Facility GPS Data Analysis and GAMIT/GLOBK Software Support | 47.05 | 300,609 |
| NATIONAL SCIENCE FOUNDATION | 6927138 | SUBCONTRACT NO. 015803-S1 | UNAVCO GPS Analysis Center Coordinator: COCONet | 47.050 | 28,303 |
| National Radio Astronomy Observatory | | | Total for UNAVCO | | 362,902 |
| NATIONAL SCIENCE FOUNDATION | 6927676 | PO #342941 | ALMA Phasing Projection Augmentation | 47.049 | 130,256 |

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 FY 2015 Expenditures by Prime Sponsor and Sponsor**

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|--|--|--------|----------------|
| University of North Texas | | | Total for National Radio Astronomy Observatory | | 130,256 |
| NATIONAL SCIENCE FOUNDATION | 6927582 | PO NT752-0000139990 SUBAWARD NO. GF1646-1 | MRI: CloudCar - Development of a Diverse Distributed Instrument for Vehicles in the Cloud | 47.070 | 68,869 |
| Georgia Institute of Technology | | | Total for University of North Texas | | 68,869 |
| NATIONAL SCIENCE FOUNDATION | 2746922 | RF481-G1 | Research Experience for Undergraduates | 47.041 | 5,075 |
| Emory University | | | Total for Georgia Institute of Technology | | 5,075 |
| NATIONAL SCIENCE FOUNDATION | 6926702 | S880659/CHE-1205646 | CCI Center in Selective C-H Functionalization | 47.049 | -2,041 |
| NATIONAL SCIENCE FOUNDATION | 6928930 | T082669 /CHE-1205646 | CCI Center in Selective C-H Functionalization | 47.049 | -17,791 |
| NATIONAL SCIENCE FOUNDATION | 6930993 | T259779 | CCI Center in Selective C-H Functionalization | 47.049 | 62,852 |
| LongWave Photonics LLC | | | Total for Emory University | | 43,021 |
| NATIONAL SCIENCE FOUNDATION | 6928534 | SBIR AGMT UNDER IIP-1330955 | SBIR Phase II: Tunable Terahertz Quantum Cascade Lasers for Spectroscopy | 47.041 | 74,940 |
| iGlobe Inc. | | | Total for LongWave Photonics LLC | | 74,940 |
| NATIONAL SCIENCE FOUNDATION | 6930600 | STTR RESEARCH AGREEMENT EFFECTIVE 07/01/2014 | STTR Phase I: Overcoming the flat view: teaching climate with an interactive spherical display | 47.CCC | 71,418 |
| Auburn University | | | Total for iGlobe Inc. | | 71,418 |
| NATIONAL SCIENCE FOUNDATION | 6924843 | SUBAGREEMENT 11-PHYS-200373-MIT | Design of a Superconducting Magnet System for a High-Field Magnetized Dusty Plasma Experiment | 47.041 | 17 |
| University of Michigan | | | Total for Auburn University | | 17 |
| NATIONAL SCIENCE FOUNDATION | 6929136 | SUBAWARD 3002943298 | EFRI-ODISSEI: Multi Scale Origami For Novel Photonics and Energy Conversion | 47.041 | 118,554 |
| Johns Hopkins University | | | Total for University of Michigan | | 118,554 |

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FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|---------------------------------------|---|--------|----------------|
| NATIONAL SCIENCE FOUNDATION | 6924816 | SUBAWARD AGMT. NO.2001325344 | EFRI-M3C: Robust Decoder-Compensator Architecture for Interactive Control of High-Speed and Loaded Movements | 47.041 | 107,536 |
| NATIONAL SCIENCE FOUNDATION | 2746684 | SUBAWARD UNDER NSF PRIME - 2002249470 | Precision Higgs Observables & New Physics Searches from QCD Resummation | 47.049 | 73,361 |
| Princeton University | | | | | 180,897 |
| NATIONAL SCIENCE FOUNDATION | 6925294 | SUBAWARD NO. 00002019 | U.S. CMS Operations at the LHC | 47.049 | 592,897 |
| National Bureau of Economic Research, Inc. | | | | | 592,897 |
| NATIONAL SCIENCE FOUNDATION | 6925482 | 'SUBAWARD NO. 223557000796617000 | Property Tax Experiment: Testing the Role of Wages, Incentives and Audit on Tax Inspectors' Behavior | 47.075 | 8,220 |
| North Carolina Agriculture & Technology State University | | | | | 8,220 |
| NATIONAL SCIENCE FOUNDATION | 6927522 | SUBAWARD NO.260211A | EAGER: Application of a Bottom-up Approach to Study Bio-adhesives' Molecular Conformation | 47.041 | -1,357 |
| Michigan Technological University | | | | | -1,357 |
| NATIONAL SCIENCE FOUNDATION | 6928536 | SUBAWD# 1211086Z1, PO# P0092165 | CNH: Managing Impacts of Global Transport of Atmosphere-Surface Exchangeable Pollutants in the Context of Global Change | 47.050 | 111,042 |
| Consortium of Ocean Leadership, Inc. | | | | | 111,042 |
| NATIONAL SCIENCE FOUNDATION | 6928825 | T346A30 | Consortium for Ocean Leadership Task Order 346A30 | 47.050 | 2,337 |
| University of Florida | | | | | 2,337 |
| NATIONAL SCIENCE FOUNDATION | 6930998 | UFDSP00010445 | Role of Nucleoside Modifications in tRNA Surveillance in Prokaryotes | 47.074 | 37,660 |
| Civilian Research and Development Foundation | | | | | 37,660 |
| NATIONAL SCIENCE FOUNDATION | 6927179 | UKP2-7074-KK-12 | Low-dimensional and bulk nanocomposite materials for thermoelectric energy conversion | 47.079 | 5,468 |

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FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|---|--|--------|---------------------|
| Wayne State University | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6924618 | WSU11095 | MRI: Development of a Chirped-Pulse, Fourier-Transform micro/mm-wave Pulsed Uniform Supersonic Flow Spectrometer | 47.081 | 11,510 |
| Total for Wayne State University | | | | | 11,510 |
| University of Hawaii | | | | | |
| NATIONAL SCIENCE FOUNDATION | 6914651 | Z792093-11 UNDER PRIME AWARD DBI-424599 | Center for Microbial Oceanography: Research and Education (C-MORE) | 47.074 | 392,692 |
| Total for University of Hawaii | | | | | 392,692 |
| TOTAL for National Science Foundation | | | | | 16,756,116 |
| TOTAL Federal Research Support - Passthrough - On Campus | | | | | \$91,612,145 |

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Massachusetts Institute of Technology
Federal Non-Research Support - On Campus
FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|--|----------------------------|---|--------|----------------|
| DEPARTMENT OF DEFENSE | | | | |
| Army | | | | |
| Army | W81XWH-13-1-0031 | Investigating the mechanism of MenalNV-driven metastasis (BC120078) - PDF for M. Oudin | 12.420 | 103,560 |
| Army | W81XWH-13-1-0215 | Development of magnetic nanovectors for treatment and imaging of breast cancer metastasis to the brain-BC122973 - PDF for O. Veisen | 12.420 | 93,125 |
| Army | W81XWH-13-1-0323 | Developing Novel Therapeutic Approaches in small cell lung carcinoma using genetically engineered mouse models and human circulating tumor cells. | 12.42 | 12,500 |
| Army | W911NF-14-1-0458 | Microscale Ocean Biophysics, Aspen Center for Physics, January 11-16, 2015 | 12.431 | 20,240 |
| Total for Army | | | | 229,424 |
| Navy | | | | |
| Navy | N00014-09-1-0597 | ECIR - Explorations in Cyber International Relations | 12.300 | 127 |
| Total for Navy | | | | 127 |
| Other DOD | | | | |
| Other DOD | H98230-14-1-0138 | Celebration of Combinatorics: A Conference Honoring Richard Stanley | 12.901 | 25,000 |
| Total for Other DOD | | | | 25,000 |
| TOTAL for Department of Defense | | | | 254,552 |

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FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|-----------------------------|----------------------------|---|--------|----------------|
| DEPARTMENT OF ENERGY | | | | |
| DOE | DE-EE0005596 | MIT Clean Energy Prize | 81.117 | 12,500 |
| DOE | DE-NE0000102 | MIT Nuclear Energy University Fellowship Program | 81.121 | 295,229 |
| DOE | DE-SC0013914 | Supplemental Funding for the US Transport Task Force April 2015 Meeting | 81.049 | 17,465 |
| | | Total for Department of Energy | | 325,194 |
| | | TOTAL for Department of Energy | | 325,194 |

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Federal Non-Research Support - On Campus
FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|--|----------------------------|--|--------|---------------|
| MISCELLANEOUS FEDERAL GOVT | | | | |
| Department of Agriculture | | | | |
| USDA | 2013-67012-21022 | Engineering Chain-length Specificity in an Aldehyde/Alcohol Dehydrogenase - PDF for Chris Reisch | 10.310 | 62,585 |
| Total for Department of Agriculture | | | | 62,585 |
| Department of Commerce | | | | |
| DOC | NA110AR4170184 | Integrating Electronic Tag Information - GF- B. Galuardi | 11.417 | -60 |
| DOC | NA15OAR4170011 | Casey Diedrich_ MIT Sea Grant _Knauss Fellowship 2015 | 11.417 | 23,809 |
| DOC | NA15OAR4170036 | Benn Carr_ MIT Sea Grant_ Knauss Fellowship 2015 | 11.417 | 22,717 |
| Total for Department of Commerce | | | | 46,466 |
| Department of Housing and Urban Development | | | | |
| HUD | RBD-MIT-13 | Rebuild by Design | 14.225 | 4,159 |
| Total for Department of Housing and Urban Development | | | | 4,159 |
| Department of Transportation | | | | |
| DOT | DTFH64-13-G-00017 | Eisenhower Graduate Fellowship: F. Chingcuanco | 20.215 | 0 |
| DOT | DTFH64-13-G-00035 | Eisenhower Graduate Fellowship: L.Chong | 20.215 | 0 |
| DOT | DTFH64-13-G-00055 | Eisenhower Graduate Fellowship: K. Selvam | 20.215 | -65 |
| DOT | DTFH64-14-G-00002 | Eisenhower Graduate Fellowship: B. Montgomery | 20.215 | 2,000 |
| DOT | DTFH64-14-G-00045 | Eisenhower Graduate Fellowship: A. Lai | 20.215 | 4,880 |
| DOT | DTFH64-14-G-00058 | Eisenhower Graduate Fellowship: Y. Wu | 20.215 | 5,000 |
| Total for Department of Transportation | | | | 11,816 |
| Other Agencies | | | | |
| Misc. | 13-3400-7101 | Interactive Database of Documentary Innovation | 45.024 | -105 |
| Misc. | 13-4400-7090 | Community Outreach Enrichment | 45.024 | -859 |
| Misc. | 15-4400-7018 | Katrin Sigurdardottir exhibition | 45.024 | 25,000 |
| Misc. | AID-OAA-A-12-00095 | CITE and IDIN | 98.001 | 3,111,360 |
| Misc. | EMAIL DATED 8/24/14 | Affordability of Public Transportation for Employees of Airports - GF- C. Nadeau | 20.108 | 10,000 |
| Misc. | FP-91743301-0 | Graduate Fellow: J. Bryant | 66.514 | 19,263 |
| Misc. | GJ-50353-11 | Guastavino Vaulting: Palaces for the People | 45.164 | 1,373 |
| Misc. | NRC-HQ-13-G-38-0043 | U.S. Nuclear Regulatory Commission Nuclear Education Faculty Development Program at MIT | 77.008 | 101,597 |

Appendix B
Massachusetts Institute of Technology
Federal Non-Research Support - On Campus
FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|---|----------------------------|---|--------|------------------|
| Misc. | NRC-HQ-13-G-38-0045 | U.S. NRC Nuclear Education Graduate Fellowship Program | 77.008 | 25,000 |
| Misc. | PE-50100-13 | Digital Preservation Management: Effective Short-Term Strategies for Long-Term Problems | 45.149 | 3,195 |
| Misc. | S-LMAQM-14-GR-1022 | Official U.S. Presentation at the 56th International Art Exhibition, Venice, Italy June through November 2015 | 19.415 | 10,000 |
| Total for Other Agencies | | | | 3,305,824 |
| TOTAL for Miscellaneous Federal Govt | | | | 3,430,850 |

Appendix B
Massachusetts Institute of Technology
Federal Non-Research Support - On Campus
FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|----------------|----------------------------|---|--------|-------------|
| NASA | NNA13AA90A | Foundations of Complex Life: Evolution, Preservation & Detection on Earth & Beyond | 43.001 | 27,538 |
| NASA | NING12FD70C | Regolith X-ray Imaging Spectrometer (REXIS) - Phase B | 43.CCC | 196,870 |
| NASA | NNH13CJ23C | InSPIRE 2 | 43.CCC | 6,540 |
| NASA | NNX10AJ90A | CAN/National Needs Grant: Summer of Innovation Pilot | 43.CCC | 61,799 |
| NASA | NNX10AT92H | Massachusetts Space Grant Consortium | 43.CCC | 553,530 |
| NASA | NNX11AM62H | Development and Testing of Compression Technologies Using Advanced Materials for Mechanical Counter-Pressure Planetary Exploration Suits - GF for B. Holschuh | 43.009 | 9,271 |
| NASA | NNX11AN09H | Development of multi-modal, high-density electrospay porous metal thrusters - GF for C. Coffman | 43.009 | 50,720 |
| NASA | NNX11AP47H | Photochemistry of Super Earth - GF for R. Hu | 43.001 | 1,940 |
| NASA | NNX12AM28H | Electrostatic and Electrochemical Optimization of Electrospay Thrusters - GF for L. Perna | 43.008 | 29,457 |
| NASA | NNX12AM29H | The Gravity Loading Countermeasure Skinsuit - GF for D. Kendrick | 43.008 | 52,900 |
| NASA | NNX12AM30H | CubeSat Deformable Mirror Demonstration - GF for A. Mariani | 43.008 | 63,053 |
| NASA | NNX12AN38H | Algorithms for P-band SAR Root-zone soil moisture Retrieval - GF for A. Konings | 43.001 | 28,452 |
| NASA | NNX12AN39H | Delineating the role of Arctic forcing in extratropical extreme weather - GF for D. Whittleston | 43.001 | 29,833 |
| NASA | NNX13AE13H | On-Chip quantum repeater in diamond for space-based quantum communication - GF for E. Chen | 43.009 | 61,059 |
| NASA | NNX13AE14H | Diamond Electron-Spin Clocks For Space Navigation and Communication - GF for H. Clevenson | 43.009 | 56,507 |
| NASA | NNX13AL57H | Modeling the Feedback from Design to Requirements in SysML - GF M. Chodas | 43.008 | 8,810 |
| NASA | NNX13AL76H | In Situ Resource Utilization in Support of Manned Space Exploration - GF Sam Schreiner | 43.008 | 69,276 |
| NASA | NNX13AM68H | Augmentation of Sensorimotor Adaptability Using Stochastic Resonance Technologies - GF R. Galvan | 43.008 | 49,632 |
| NASA | NNX13AM69H | Reusable Communication Infrastructure for Small Satellites - GF R. Kingsbury | 43.008 | 60,145 |
| NASA | NNX13AN67H | Climatic and geodynamic influences on ocean island landscape evolution - PD K. Huppert | 43.001 | 30,092 |
| NASA | NNX14AE26H | NASA AERONAUTICS SCHOLARSHIP PROGRAM | 43.002 | 46,000 |
| NASA | NNX14AE94H | NASA AERONAUTICS SCHOLARSHIP PROGRAM | 43.002 | 7,500 |

Appendix B
Massachusetts Institute of Technology
Federal Non-Research Support - On Campus
FY 2015 Expenditures

| Federal Agency | Government Contract Number | Master Project Name | CFDA # | FY Expenses |
|--|----------------------------|---|--------|------------------|
| NASA | NNX14AK80H | Evaluation and Optimization of Nano-Satellite Clusters for Bi-Directional Reflectance Estimation | 43.001 | 30,000 |
| NASA | NNX14AK83H | The variability of chemical constituents in the tropical tropopause layer, their radiative impacts, and implications for tropical cyclones - PDF D. Gifford | 43.001 | 14,000 |
| NASA | NNX14AK84H | Understanding Atmospheric Particles Using Single Particle Mass Spectrometry - PDF M. Zawadowicz | 43.001 | 23,000 |
| NASA | NNX14AL47H | Hierarchical Composites with Nanostructured Reinforcement for Multifunctional Aerospace Structures - GF R. Li | 43.009 | 46,024 |
| NASA | NNX14AL48H | Superconducting Nanowire Single Photon Detectors for High-Data-Rate Deep-Space Optical Communication | 43.009 | 54,771 |
| NASA | NNX14AL49H | Modular portable life support system (PLSS) to increase EVA mobility and reduce consumables | 43.009 | 46,423 |
| NASA | NNX14AL57H | Evaluating the Impact of Design-Driven Requirements Using SysML (Mark Chodas) | 43.009 | 48,619 |
| NASA | NNX14AL61H | Two-Stage Approach to Path and Attitude Planning for Reconfigurable Spacecraft - GF K. Riesing | 43.009 | 52,029 |
| NASA | NNX14AL74H | Developing an Adaptive Robotic Assistant for Close-Proximity Human-Robot Interaction in Space Environments | 43.009 | 52,120 |
| NASA | NNX14AM40H | Topological Optimization and Automated Construction for Lightweight Structures - G.F. Benjamin Jenett | 43.009 | 46,726 |
| NASA | NNX14AM42H | Quantifying the Value of Resilience in Long-Duration Space Systems- G.F. A. Owens | 43.009 | 44,552 |
| NASA | NNX14AM57H | The Micro-X X-ray Imaging Spectrometer - G.F. D. Goldfinger | 43.009 | 48,339 |
| NASA | NNX14AR05A | National Space Grant College and Fellowship Program (Space Grant) | 43.008 | 3,034 |
| NASA | NNX14AT13H | NASA Aeronautics Scholarship Program | 43.002 | 46,000 |
| NASA | NNX14AT14H | NASA Aeronautics Scholarship Program | 43.002 | 46,000 |
| Total for National Aeronautics and Space Administration | | | | 2,102,562 |
| TOTAL for National Aeronautics and Space Administration | | | | 2,102,562 |

TOTAL Federal Non-Research Support - On Campus **6,113,158**

Appendix C
Massachusetts Institute of Technology
Federal Non-Research Support - Passthrough - On Campus
FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|----------------------------|--|--------|------------------|
| DEPARTMENT OF DEFENSE | | | | | |
| Building Engineering & Science Talent | | | | | |
| DEPARTMENT OF DEFENSE | 2746356 | 2014 MOU | A Proposal for the SeaGlide Program at MIT | 12.CCC | 83,172 |
| DEPARTMENT OF DEFENSE | 2746778 | LTR. DATED 11/7/14 | SeaGlide: Supplemental Modifications | 12.CCC | 1,478 |
| Total for Building Engineering & Science Talent | | | | | 84,650 |
| Massachusetts General Hospital | | | | | |
| DEPARTMENT OF DEFENSE | 2388614 | BILLING AGREEMENT - 221334 | Letter Agreement: Meaghan O'Neil | 12.420 | 6,000 |
| Total for Massachusetts General Hospital | | | | | 6,000 |
| American Society/Engineering Education | | | | | |
| DEPARTMENT OF DEFENSE | 2291100 | LETTER DATED 8/1/99 | NDSEG Fellowship Program | 12.300 | 3,820,601 |
| Total for American Society/Engineering Education | | | | | 3,820,601 |
| Draper Laboratory Incorporated | | | | | |
| DEPARTMENT OF DEFENSE | 2745573 | PO 001-0001026229 | Draper Fellow Reporting Parent FY 12/13 | 12.CCC | -20,483 |
| DEPARTMENT OF DEFENSE | 2746549 | PO 001-000102635 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 48,769 |
| DEPARTMENT OF DEFENSE | 2745894 | PO 001-0001027973 | Draper Fellow Reporting Parent FY 13/14 | 12.CCC | 0 |
| DEPARTMENT OF DEFENSE | 2745897 | PO 001-0001027980 | Draper Fellow Reporting Parent FY 13/14 | 12.CCC | 0 |
| DEPARTMENT OF DEFENSE | 2745914 | PO 001-0001028087 | Draper Fellow Reporting Parent FY 13/14 | 12.CCC | 1,011 |
| DEPARTMENT OF DEFENSE | 2745908 | PO 001-0001028098 | Draper Fellow Reporting Parent FY 13/14 | 12.CCC | 0 |
| DEPARTMENT OF DEFENSE | 2745898 | PO 001-0001028100 | Draper Fellow Reporting Parent FY 13/14 | 12.CCC | 0 |
| DEPARTMENT OF DEFENSE | 2745899 | PO 001-0001028102 | Draper Fellow Reporting Parent FY 13/14 | 12.CCC | 0 |
| DEPARTMENT OF DEFENSE | 2745925 | PO 001-0001028580 | Draper Fellow Reporting Parent FY 13/14 | 12.CCC | 0 |
| DEPARTMENT OF DEFENSE | 2745941 | PO 001-0001028582 | Draper Fellow Reporting Parent FY 13/14 | 12.CCC | 0 |
| DEPARTMENT OF DEFENSE | 2745909 | PO 001-0001028584 | Draper Fellow Reporting Parent FY 13/14 | 12.CCC | 0 |
| DEPARTMENT OF DEFENSE | 2745948 | PO 001-0001029255 | Draper Fellow Reporting Parent FY 13/14 | 12.CCC | -1,254 |
| DEPARTMENT OF DEFENSE | 2745910 | PO 001-0001029801 | Draper Fellow Reporting Parent FY 13/14 | 12.CCC | 0 |
| DEPARTMENT OF DEFENSE | 2745902 | PO 001-0001029976 | Draper Fellow Reporting Parent FY 13/14 | 12.CCC | 0 |
| DEPARTMENT OF DEFENSE | 2745920 | PO 001-0001030363 | Draper Fellow Reporting Parent FY 13/14 | 12.CCC | 0 |
| DEPARTMENT OF DEFENSE | 2745911 | PO 001-0001030364 | Draper Fellow Reporting Parent FY 13/14 | 12.CCC | -1,372 |
| DEPARTMENT OF DEFENSE | 2746511 | PO 001-0001031837 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 60,497 |
| DEPARTMENT OF DEFENSE | 2746514 | PO 001-0001031845 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 62,966 |
| DEPARTMENT OF DEFENSE | 2746520 | PO 001-0001032046 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 54,213 |

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Federal Non-Research Support - Passthrough - On Campus
FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|--------------------|--|--------|------------------|
| DEPARTMENT OF DEFENSE | 2746537 | PO 001-0001032260 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 7,938 |
| DEPARTMENT OF DEFENSE | 2746513 | PO 001-0001032261 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 20,633 |
| DEPARTMENT OF DEFENSE | 2746512 | PO 001-0001032262 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 57,108 |
| DEPARTMENT OF DEFENSE | 2746544 | PO 001-0001032263 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 50,435 |
| DEPARTMENT OF DEFENSE | 2746530 | PO 001-0001032331 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 20,792 |
| DEPARTMENT OF DEFENSE | 2746515 | PO 001-0001032397 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 60,510 |
| DEPARTMENT OF DEFENSE | 2746522 | PO 001-0001032399 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 35,554 |
| DEPARTMENT OF DEFENSE | 2746521 | PO 001-0001032400 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 59,194 |
| DEPARTMENT OF DEFENSE | 2746545 | PO 001-0001032401 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 31,614 |
| DEPARTMENT OF DEFENSE | 2746517 | PO 001-0001032521 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 54,362 |
| DEPARTMENT OF DEFENSE | 2746516 | PO 001-0001032525 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 52,903 |
| DEPARTMENT OF DEFENSE | 2746531 | PO 001-0001032614 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 54,111 |
| DEPARTMENT OF DEFENSE | 2746533 | PO 001-0001032657 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 33,327 |
| DEPARTMENT OF DEFENSE | 2746538 | PO 001-0001033171 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 48,546 |
| DEPARTMENT OF DEFENSE | 2746518 | PO 001-0001033392 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 39,103 |
| DEPARTMENT OF DEFENSE | 2746546 | PO 001-0001033454 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 31,708 |
| DEPARTMENT OF DEFENSE | 2746535 | PO 001-0001033456 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 34,966 |
| DEPARTMENT OF DEFENSE | 2746526 | PO 001-0001033458 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 34,966 |
| DEPARTMENT OF DEFENSE | 2746527 | PO 001-0001033460 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 46,287 |
| DEPARTMENT OF DEFENSE | 2746519 | PO 001-0001033463 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 46,287 |
| DEPARTMENT OF DEFENSE | 2746529 | PO 001-0001033495 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 34,966 |
| DEPARTMENT OF DEFENSE | 2746528 | PO 001-0001033498 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 34,966 |
| DEPARTMENT OF DEFENSE | 2746539 | PO 001-0001033520 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 10,570 |
| DEPARTMENT OF DEFENSE | 2746536 | PO 001-0001034146 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 46,287 |
| DEPARTMENT OF DEFENSE | 2746532 | PO 001-000103455 | Draper Fellow Reporting Parent FY 14/15 | 12.CCC | 46,287 |
| DEPARTMENT OF DEFENSE | 2746961 | PO 001-0001035518 | Draper Fellow Reporting Parent FY 15/16 | 12.CCC | 2,757 |
| DEPARTMENT OF DEFENSE | 2746962 | PO 001-0001035521 | Draper Fellow Reporting Parent FY 15/16 | 12.CCC | 2,757 |
| DEPARTMENT OF DEFENSE | 2746963 | PO 001-0001035526 | Draper Fellow Reporting Parent FY 15/16 | 12.CCC | 2,757 |
| DEPARTMENT OF DEFENSE | 2746965 | PO 001-0001035552 | Draper Fellow Reporting Parent FY 15/16 | 12.CCC | 3,018 |
| Total for Draper Laboratory Incorporated | | | | | 1,209,063 |
| Lincoln Laboratory | | | | | |
| DEPARTMENT OF DEFENSE | 2746332 | PO#7000263555 | Support of the MIT Security Studies Program | 12.CCC | 29,574 |
| DEPARTMENT OF DEFENSE | 2746848 | PO#7000303721 | 2015 Support of the MIT Security Studies Program | 12.CCC | 8,040 |
| Total for Lincoln Laboratory | | | | | 37,614 |

Appendix C
Massachusetts Institute of Technology
Federal Non-Research Support - Passthrough - On Campus
FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--------------------------------|----------------|-----------------------|---|--------|------------------|
| Institute For Defense Analyses | 2746676 | PURCHASE ORDER A61709 | Computing the Future - Project Mac | 12.CCC | 52,295 |
| DEPARTMENT OF DEFENSE | | | Total for Institute For Defense Analyses | | 52,295 |
| | | | TOTAL for Department of Defense | | 5,210,223 |

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Massachusetts Institute of Technology
Federal Non-Research Support - Passthrough - On Campus
FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|-------------------------------|--|--------|----------------|
| DEPARTMENT OF ENERGY | | | | | |
| Battelle-Pacific Northwest Laboratories | | | | | |
| DEPARTMENT OF ENERGY | 2745048 | CONTRACT NO. 162002 | GTRI NUCLEAR SECURITY EDUCATION INITIATIVE IMPLEMENTATION | 81.CCC | 162,355 |
| Total for Battelle-Pacific Northwest Laboratories | | | | | 162,355 |
| Krell Institute | | | | | |
| DEPARTMENT OF ENERGY | 2225900 | FELLOWSHIP COMMITMENT | DOE-CSGF Krell Institute | 81.049 | 16,212 |
| DEPARTMENT OF ENERGY | 2388625 | LTR. AGREEMENT | DOE NNSA Stewardship Science Graduate Fellowship Program - G.F. M. Robinson | 81.049 | 889 |
| DEPARTMENT OF ENERGY | 2388618 | LTR. AGREEMENT | DOE NNSA Stewardship Science Graduate Fellowship Program - H.Sio | 81.049 | 290 |
| Total for Krell Institute | | | | | 17,391 |
| Hydro Research Foundation | | | | | |
| DEPARTMENT OF ENERGY | 2388814 | LTR. DATED 4/9/14 | A Study of Novel Hydrophobic Rare Earth Oxide-based Coatings for Enhancing Longevity of Hydropower Water Conveyance Structures Pre Doc S. Khan | 81.CCC | 26,481 |
| Total for Hydro Research Foundation | | | | | 26,481 |
| Sandia National Laboratories | | | | | |
| DEPARTMENT OF ENERGY | 2388430 | PO 1154670 UNDER 611557 | Sandia Fellowship - Dwyer | 81.CCC | 2,623 |
| Total for Sandia National Laboratories | | | | | 2,623 |
| National Renewable Energy Laboratory | | | | | |
| DEPARTMENT OF ENERGY | 2388713 | UGA-0-41029-11 TASK PV 136040 | Development of Low Electron Affinity, n-doped Materials as Cu ₂ O and SnS Heterojunction Partners - GF R. Brandt | 81.CCC | 3,139 |
| Total for National Renewable Energy Laboratory | | | | | 3,139 |
| TOTAL for Department of Energy | | | | | 211,989 |

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Massachusetts Institute of Technology
Federal Non-Research Support - Passthrough - On Campus
FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|------------------------|--|--------|----------------|
| MISCELLANEOUS FEDERAL GOVT | | | | | |
| National Academy of Sciences | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 2388838 | 2000004599 | Hand washing and Habit Formation in West Bengal - GF R. Hussam | 98.001 | 3,506 |
| MISCELLANEOUS FEDERAL GOVT | 2388837 | 2000004600 | Development of prosthetics for low resource areas in Africa - PDF A. Brown | 98.001 | 7,789 |
| MISCELLANEOUS FEDERAL GOVT | 2388839 | 2000004601 | Hand washing and Habit Formation in West Bengal - GF N. Rigol | 98.001 | 4,928 |
| Total for National Academy of Sciences | | | | | 16,224 |
| Quinsigamond Community College | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 2746219 | 20140930-4328KMA | Innovative Technology Enabled Learning Modules in Advanced Manufacturing | 17.282 | 216,590 |
| Total for Quinsigamond Community College | | | | | 216,590 |
| Institute of International Education, Inc. | | | | | |
| MISCELLANEOUS FEDERAL GOVT | 2388734 | AGREEMENT DATED 7/1/13 | Hubert H Humphrey Fellowship Program (SPURS) 2013-2014 | 19.010 | 10,598 |
| MISCELLANEOUS FEDERAL GOVT | 2388821 | AGREEMENT DATED 7/1/14 | Hubert H Humphrey Fellowship Program (SPURS) 2014-2015 | 19.010 | 210,557 |
| Total for Institute of International Education, Inc. | | | | | 221,155 |
| TOTAL for Miscellaneous Federal Govt | | | | | 453,969 |

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Massachusetts Institute of Technology
Federal Non-Research Support - Passthrough - On Campus
FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|--|----------------|--------------------------------------|---|--------|----------------|
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | | | | | |
| CalTech - Jet Propulsion Lab | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 2746818 | 1515938 | Modeling and Control of Ionization Oscillations in Hall and Related Thrusters | 43.CCC | 18,023 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 2746817 | 1516570 | Space Systems Product Development: Educating the Next Generation of Space Systems Engineers | 43.CCC | 6,056 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 2745267 | RSA NO. 1457621 | Space Systems Product Development: Educating the Next Generation of Space Systems Engineers | 43.CCC | 83 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 2746259 | RSA NO. 1492489 | Space Systems Product Development: Educating the Next Generation of Space Systems Engineers | 43.CCC | 7,385 |
| Total for CalTech - Jet Propulsion Lab | | | | | 31,547 |
| California Institute of Technology | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 2388464 | 2-1090927 | UNDER NASA PRIME Sagan Postdoctoral Fellowship Program - B. Croll | 43.CCC | 13,392 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 2388575 | 2-1092711 | Sagan Postdoctoral Fellowship Program - N. Lewis | 43.CCC | 32,958 |
| Total for California Institute of Technology | | | | | 46,350 |
| Baylor College of Medicine | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 2745378 | EO02002 | Mentored Research Program in Space Life Sciences | 43.CCC | 200,622 |
| Total for Baylor College of Medicine | | | | | 200,622 |
| Space Telescope Science Institute | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 2388897 | HST-HF2-51343.001-A | Heart of Darkness: Weakly Accreting Black Holes and the Physics of Accretions and Ejection - PDF for J. Neilsen | 43.CCC | 52,855 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 2388560 | HST-HF-51308.01-A | The Present State of Evolution - PDF for M. McDonald | 43.CCC | 122,303 |
| Total for Space Telescope Science Institute | | | | | 175,158 |
| Commonwealth of Massachusetts - Miscellaneous | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 2732483 | MASSACHUSETTS SPACE GRANT CONSORTIUM | Massachusetts Space Grant Consortium | 43.CCC | 4,275 |
| Total for Commonwealth of Massachusetts - Miscellaneous | | | | | 4,275 |
| Center for Advancement of Science in Space | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 2746498 | OA-2014-128 | Zero Robotics Middle School Summer Program 2014 | 43.CCC | 100,000 |

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Massachusetts Institute of Technology
Federal Non-Research Support - Passthrough - On Campus
FY 2015 Expenditures by Prime Sponsor and Sponsor

| Prime Sponsor Name | Project WBS id | Passthrough Number | WBS Project Name | CFDA # | FY Expenses |
|---|----------------|--------------------|--|--------|------------------|
| Smithsonian Inst. - Astrophysical Observatory | | | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 2388425 | PF2-120085 | Dissecting Supernova Remnants and Hill Regions Observed with Chandra - Post Doc. L. Lopez | 43.CCC | 12,217 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 2388550 | PF2-130102 | The Nature of the Fermi Bubble: Implications for Interstellar Medium and the Growth of the Supermassive Black Hole in the Milky Way - Post Doc M. Su | 43.001 | 88,178 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION | 2388862 | PF4-150126 | Modeling radiative accretion disks in general relativity - Post Doc - A. Sadowski | 43.001 | 83,690 |
| Total for Smithsonian Inst. - Astrophysical Observatory | | | | | 184,085 |
| TOTAL for National Aeronautics and Space Administration | | | | | 742,037 |
| TOTAL Federal Non-Research Support - Passthrough - On Campus | | | | | 6,618,217 |

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SECTION III

REPORTS ON INTERNAL CONTROL AND COMPLIANCE AND SUMMARY OF AUDITORS' RESULTS

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Independent Auditor’s Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

To the Risk and Audit Committee of the
Massachusetts Institute of Technology

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the consolidated financial statements of the Massachusetts Institute of Technology (the “Institute”) and its subsidiaries, which comprise the consolidated statement of financial position as of June 30, 2015, and the related consolidated statements of activities and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated September 11, 2015.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Institute’s internal control over financial reporting (“internal control”) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Institute’s internal control. Accordingly, we do not express an opinion on the effectiveness of the Institute’s internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity’s financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Institute’s financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The



results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

PricewaterhouseCoopers LLP

September 11, 2015



**Independent Auditor’s Report on Compliance with Requirements
That Could Have a Direct and Material Effect on Each Major Program and on Internal
Control over Compliance in Accordance with OMB Circular A-133**

To the Risk and Audit Committee of the
Massachusetts Institute of Technology

Report on Compliance for Each Major Federal Program

We have audited the Massachusetts Institute of Technology’s (the “Institute”) compliance with the types of compliance requirements described in the *OMB Circular A-133 Compliance Supplement* that could have a direct and material effect on each of the Institute’s major federal programs for the year ended June 30, 2015. The Institute’s major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

Management’s Responsibility

Management is responsible for compliance with the requirements of laws, regulations, contracts, and grants applicable to its federal programs.

Auditor’s Responsibility

Our responsibility is to express an opinion on compliance for each of the Institute’s major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and OMB Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations*. Those standards and OMB Circular A-133 require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the Institute’s compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the Institute’s compliance.

Opinion on Each Major Federal Program

In our opinion, the Institute complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2015.

Other Matters

The results of our auditing procedures disclosed an instance of noncompliance, which is required to be reported in accordance with OMB Circular A-133 and which is described in the accompanying schedule of findings and questioned costs as item 2015-001. Our opinion on each major federal program is not modified with respect to this matter.



The Institute's response to the noncompliance findings identified in our audit is described in the accompanying Schedule of Findings and Questioned Costs and Corrective Action Plan. The Institute's response was not subjected to the auditing procedures applied in the audit of compliance and, accordingly, we express no opinion on the response.

Report on Internal Control over Compliance

Management of the Institute is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the Institute's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with OMB Circular A-133, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the Institute's internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. *A material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. *A significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of OMB Circular A-133. Accordingly, this report is not suitable for any other purpose.

PricewaterhouseCoopers LLP

March 8, 2016

**Massachusetts Institute of Technology
 Schedule of Findings and Questioned Costs
 Year Ended June 30, 2015**

Section I Summary of Auditor's Results

Financial Statements

Type of auditor's report issued Unmodified

Internal control over financial reporting

Material weakness(es) identified ___ Yes X No

Significant deficiency (ies) identified that are not considered to be material weaknesses ___ Yes X None Reported

Noncompliance material to financial statements noted? ___ Yes X No

Federal Awards

Internal control over major programs

Material weakness (es) identified? ___ Yes X No

Significant deficiency (ies) identified that are not considered to be material weaknesses? ___ Yes X None Reported

Type of auditor's report issued on compliance for major programs Unmodified

Any audit findings disclosed that are required to be reported in accordance with section 510(a) of OMB Circular A-133? X Yes ___ No

Identification of major programs

| | |
|--------------------|---|
| CFDA Number | Name of Federal Program or Cluster |
| Various | Student Financial Assistance Cluster |
| Various | Research & Development Cluster |

Dollar threshold used to distinguish between Type A and Type B programs \$4,326,233

Auditee qualifies as a low-risk auditee? X Yes ___ No

Section II Financial Statement Findings

None noted.

**Massachusetts Institute of Technology
Schedule of Findings and Questioned Costs
Year Ended June 30, 2015**

Section III Federal Award Findings and Questioned Costs

Finding 2015-001

Compliance Requirement: Subrecipient Monitoring (M)

| Federal Program Involved | CFDA Number | Award Number | Award Year |
|---|--------------------|---------------------|-------------------------|
| Research and Development: | | | |
| Department of Defense - Army | 12.431 | W911NF-11-1-0400 | 9/1/2011 – 8/31/2016 |
| Air Force Office of Scientific Research | 12.800 | FA9550-11-1-0339 | 9/30/2011 – 1/31/2015 |
| Air Force Office of Scientific Research | 12.800 | FA9550-14-1-0052 | 12/15/2013 – 12/14/2016 |
| National Science Foundation | 47.041 | CBET-0939511 | 9/15/2010 – 8/31/2016 |
| US Department of Transportation | 20.701 | DTRT12-G-UTC01 | 1/1/2012 – 1/31/2016 |
| Department of Energy – Chicago | 81.049 | DE-SC0001299 | 8/1/2014 – 7/31/2018 |
| Department of Health and Human Services | 93.350 | 1UH2-TR000496-01 | 7/24/2012 – 6/30/2017 |
| Department of Health and Human Services | 93.859 | 1R01-GM101420-01A1 | 8/1/2013 – 4/30/2016 |

Criteria

OMB Circular A-133, Subpart D, Section 400(d) includes details that a pass-through entity shall perform the following for the Federal awards it makes:

- Monitor the activities of subrecipients as necessary to ensure that Federal awards are used for authorized purposes in compliance with laws, regulations, and the provisions of contracts or grant agreements and those performance goals are achieved.
- Ensure that subrecipients expending \$500,000 or more in Federal awards during the subrecipient's fiscal year have met the audit requirements of this part for that fiscal year.
- Issue a management decision on audit findings within six months after receipt of the subrecipient's audit report and ensure that the subrecipient takes appropriate and timely corrective action.
- Consider whether subrecipient audits necessitate adjustment of the pass-through entity's own records.
- Require each subrecipient to permit the pass-through entity and auditors to have access to the records and financial statements as necessary for the pass-through entity to comply with this part.

Condition

The Institute has policies and procedures in place over subrecipients which includes an initial risk assessment on all subrecipients and ongoing monitoring to ensure that subrecipients expending \$500,000 or more in Federal awards during the subrecipient's fiscal year have met the A-133 reporting requirements. The Institute reviews the results of the subrecipient's most recent A-133 report. For 8 of the 40 subrecipients selected for testing, the most recent A-133 report highlighted deficiencies including material weaknesses, related to the R&D cluster of the respective subrecipient. Based on the review there was no observable evidence that the Institute's management followed up with the subrecipients on the indirect implications these control deficiencies had on the Institute. There was no evidence of any follow up discussions with the subrecipient to understand the cause of the issues, implications, and corrective action plan anticipated based on the understanding of the A-133 compliance supplement by the Institute.

Massachusetts Institute of Technology
Schedule of Findings and Questioned Costs
Year Ended June 30, 2015

The initial risk assessment of these subrecipients should have been reevaluated based on the most current A-133 report and management's decision of any implications should have been documented.

Cause

The Institute's policies and procedures over subrecipient monitoring do not address the necessary follow-up on findings that are reported in their subrecipient A-133 reports.

Effect

Without the appropriate level of subrecipient monitoring, the Institute has an increased risk that federal funding disbursed to a subrecipient will not be effectively managed and expended in accordance with the terms and conditions of its agreement with the federal agency.

Questioned Costs

There are no questioned costs.

Recommendation

We recommend that the Institute develop more robust procedures related to the monitoring of subrecipient A-133 reports, including appropriate communication with subrecipients concerning any control deficiencies, significant deficiencies, material weaknesses, and compliance findings that may be included in the a-133 reports. This communication and agreed upon subrecipient plans to correct such deficiencies and findings as well as any further monitoring must be documented.

Management's Views and Corrective Action Plan

Management's Views and Corrective Action Plan is included at the end of this report.

Massachusetts Institute of Technology
Summary Schedule of Prior Audit Findings
Year Ended June 30, 2015

Student Financial Aid Cluster

Finding 2014-001

Compliance Requirement: Enrollment Reporting (N)

| Federal Program Involved | CFDA Number | Award Year |
|---------------------------------|--------------------|-------------------|
| Federal Perkins Loan | 84.038 | 7/1/13 – 6/30/14 |
| Federal Direct Loan Program | 84.268 | 7/1/13 – 6/30/14 |

Condition: Out of 25 students selected for status change testing, PwC noted two (2) selections for which the status change was reported to NSLDS outside of the 60 day requirement. For the two students, the status changes were reported between 41 and 144 days late.

Current Year Update:

Student Financial Services and the Registrar's Office have worked together, with communication from the Institute's Perkins Loan program servicer and the National Student Clearinghouse, to create a detailed and accurate map of the enrollment reporting process. The Registrar's Office has implemented an email reminder to all relevant administrators to submit status changes in a timely fashion. A plan is in place by the Registrar's Office to test new degree types before submitted data to the National Clearinghouse (no new degree types have been created since the FY14 audit finding).

Massachusetts Institute of Technology
Summary Schedule of Prior Audit Findings
Year Ended June 30, 2015

Research and Development Cluster

Finding 2014-002

Compliance Requirement: Davis-Bacon Act (D)

| Federal Program Involved | Contract Number | Award Year |
|----------------------------------|------------------------|-------------------|
| Research and Development Cluster | FA8721-05-C-0002 | 2005-2010 |

Lincoln Laboratory Programs/Cost centers: S150512; 1800-11; 10087-11; S002002; 3-6901; S152001; 1971-81; 1971-91; S150521; 2073-823; 10143-21

Condition: PwC selected a total of 25 purchase orders, across multiple R&D awards for testing of the Davis-Bacon Act compliance requirement. PwC noted that for 7 out of the 25 purchase orders tested, MIT Lincoln Laboratory did not obtain the required weekly certified payrolls in a timely manner. The weekly certified payrolls from vendors were obtained when invoiced by the contractor rather than on a weekly basis.

Current Year Update:

The Contracting Services Department put an emphasis on the importance of subcontractors' submittal of weekly certified payrolls for construction contracts subject to the Davis-Bacon Act in February 2015. The Laboratory conducted a follow-on audit in the fall of 2015 and determined that weekly payrolls are being submitted by subcontractors and are being maintained as part of the purchase order records.

Research and Development Cluster

Finding 2014-003

Compliance Requirement: Subrecipient Monitoring (M)

| Federal Program Involved | Contract Number | Award Year |
|----------------------------------|------------------------|-------------------|
| Research and Development Cluster | FA8721-05-C-0002 | 2005 - 2010 |

Lincoln Laboratory Program: 2237, 1788, 10035; 1918; 2232

Condition: PwC selected a total of 50 subrecipient agreements across multiple R&D awards for testing. Of the 25 tested for MIT Lincoln Laboratory, PwC noted 5 instances where MIT Lincoln Laboratory obtained the subrecipient's A-133 report in the year that it was initiated but didn't have it for the subsequent year if the program expenditures carried over to another fiscal year. However, for all of those exceptions MIT (either On Campus or Lincoln Laboratory) did have evidence that MIT reviewed the appropriate subrecipient's A-133 report as part of subrecipient monitoring of a separate agreement with the same subrecipient. The other subrecipient agreement was entered in to with MIT Lincoln Laboratory or MIT On Campus.

Current Year Update:

The Contracting Services Department considered the centralization of subrecipient monitoring data with the MIT Office of Sponsored Research (OSP) but determined that a better and more compliant approach for the Laboratory was to strengthen local procedures and emphasize complete documentation within individual purchase order files. A follow-on audit by the Laboratory in the fall of 2015 found issues on a very small number of non-university subrecipients which were corrected and which allowed the ACO to close the finding, by letter dated November 11, 2015. There were no findings at the Laboratory in the area of subrecipient monitoring for the FY2015 A-133 audit.

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February 9, 2016

MIT has received and reviewed draft audit finding (2015-001) regarding A-133 Compliance Requirement M (Subrecipient Monitoring) developed as part of PWC's FY 2015 A-133 audit of MIT. MIT management's response and corrective action plan appear below.

2015-001 - Compliance Requirement: Subrecipient Monitoring (M)

MIT understands and embraces the principles of subrecipient monitoring as outlined in A-133 and the compliance supplement, and understands the necessity of implementing processes that identify those subawards where greater than normal care should be taken to ensure that Federal awards are used for authorized purposes in compliance with laws, regulations, and provisions of contracts or grant agreements and that performance goals are achieved.

Accordingly, we will review and revise our A-133 Sub-recipient risk analysis policies and procedures. Factors to be considered may include:

- Whether the A-133 audit contains any Internal Control Findings, meaning either a Material Weakness (MW) or a Significant Deficiency (SD).
- Whether any such MW(s) or SD(s) are related to research administration.
- Whether any such research-related Findings are relevant to a specific subaward being managed by MIT.
- Whether there are any Control Deficiencies that are related to research administration and directly related to a specific program under which MIT is administering a subaward with the particular sub-recipient.

We will design our policies and procedures to take such factors as these into account, as appropriate. Each A-133 organization will be reviewed annually, and the results of this process will be reviewed with management to confirm that determinations being made are appropriate.

Issue Coordinator: Craig Newfield, Assistant Director, MIT Office of Sponsored Programs
Completion Date: June 30, 2016