DC Office for Research Advancement

Mission Agency (mainly DOD, DOE, ED and NASA) Young Investigator/Early Career Awards

Database with prior DoD/DoE YIP/Early Career awardee information is available

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Randolph Hall

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Natasha Walker

Science Writer
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Science Writer
Dan Barker

Program Manager
Richard May

Project Specialist
Ashley Gordon

Project Specialist
Colette Alexander
DC Research Advancement Office: Services

• **Research Funding**
  – Research initiative alerts
  – Collaborations across schools, other institutions
  – Federal funding agency advocacy
  – Strategically targeted activities
  – Application preparation/scientific contribution

• **Visibility/Prestige**
  – (Inter)national conferences / workshops
  – Strategic partnerships
  – Advisory/planning committees

• **Faculty Development**
  – Grant-writing courses
  – Talks – staff from DC Office, federal funding agencies
  – Faculty recruitment
This Federal Mission Agencies Program Site (MAPS) is designed to connect USC faculty with appropriate DHS/DoD/DoE/ED/EPA/NASA/NIST/NOAA/USDA program officers and to assist in developing white papers/charts/elevator speeches that will catch their attention.

What is on the site:

Under “Wiki” Tab - how to use the site

Under “Files/Discussion” Tab
Mission Agency (DHS, DoD, DoE, ED, EPA, NASA, NIST, NOAA, USDA and cross agency programs in Adv Manuf, Sustainability, STEM-Ed)
Guide to Agency YY Funding for FYXX
Agency Research Program Charts
Agency S&T Planning Documents
Program Officer Data sheets (with contact info, biosketch, program descriptive, illustrative personal publications)
Program Officer presentations (when available)
Guides to Proposal Writing

Under “Database” Tab
USC MAPS - searchable table of all program officers / programmatic interest

Available at Central Desktop  http://www.centraldesktop.com/
Get user name and password from Natasha Walker - nlwalker@usc.edu
Biosketch:
Laura Kienker was a Research Biologist within the Counterterrorism and Forensic Science Research Unit of the FBI Laboratory, where she managed outsourced research projects pertaining to automating the forensic analysis of biological evidence. Prior to joining the FBI, Dr. Kienker directed a Sequencing and Microarray Core Facility for the Center for Immunology at the University of Texas Southwestern Medical Center in Dallas, where she was an Assistant Instructor in the Department of Internal Medicine.

Education
B.A. in Biology and Chemistry from Oberlin College
Ph.D. in Immunology from the University of Pennsylvania

Program:
Metabolic Engineering
The Office of Naval Research (ONR) Metabolic Engineering Program targets the fundamental understanding of metabolic processes in microbes or plants for the production of chemicals of potential utility to the Navy. Biosynthetic strategies must have clear advantages over conventional chemical-based synthesis routes.

Biomaterials and Bionanotechnology
The Office of Naval Research (ONR) Biomaterials and Bionanotechnology Program supports fundamental research that enables the generation of novel, Navy relevant, nano-scale materials and devices.

Illustrative Papers Reflecting Personal Research Interests:
Both V(D)J recombination and radio resistance require DNA-PK kinase activity, though minimal levels suffice for V(D)J recombination
Kienker LJ; Shin EK; Meek K
NUCLEIC ACIDS RESEARCH 28(14), 2752-2761 JUL 15 2000

Regulatory elements in the promoter of a murine TCRD V gene segment
Kienker LJ; Ghosh MR; Tucker PW
JOURNAL OF IMMUNOLOGY 161(2), 791-804 JUL 15 1998
Proposal Writing Resources
(many available at USC’s Central Desktop MAPS)

NSF CAREER

USC CAREER workshop charts
CAREER Proposal Writing charts
CAREER Proposal Writing Tips (2007, 64 page book)
CAREER Program Presentation (2013)
Writing a Successful CAREER Proposal charts
Broad(er) impacts of the NSF CAREER Proposal

Randy Hall, USC
George Hazelrigg, NSF
ZJ Pei, Kansas State
LA Salle, NSF CISE
Michelle Vigeant, Univ Hartford
Tony Schmitz, UNC-Charlotte

Other

Tips for Authoring Grant Proposals
Tips on Writing a Competitive Grant Proposal
Writing a good grant Proposal
Guide for Writing a Funding Proposal
Obtaining Federal Funding
The R&D Proposal
Demystifying DoD Research Funding

Hill, Univ Wisc-Madison
Clary, Western SARE
Jones, Microsoft
Levine, Mich State Univ.
Wardle, NSF
Yoder, Office of Naval Research
Palmer, Army Research Office

NSF Guide for Proposal Writing
NASA Writing Research Proposals
NIH Writing your application
USDA NIFA General Proposal Writing Tips
EPA Writing a Competitive Proposal

NSF 04-016
Hertz, NASA Headquarters
http://grants.nih.gov/grants/writing_application.htm
http://www.epa.gov/ogd/recipient/tips.htm
Selected Agency Young Investigator / Early Career Programs

White House - Presidential Early Career Award for Scientists and Engineers (PECASE)

National Science Foundation (NSF) - go to Phil Taylor presentation (Feb 19, 2014)
  CAREER http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503214
  BRIGE http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503160

National Institute of Health (NIH) - go to Steve Moldin presentation (Mar 12, 2014)
  New and Early Stage Investigator http://grants.nih.gov/grants/new_investigators/index.htm
  Career Development Awards http://grants.nih.gov/training/careerdevelopmentawards.htm

Department of Defense (DOD)
  DTRA YIP
  DARPA Young Faculty http://www.darpa.mil/Opportunities/Universities/Young_Faculty.aspx
  CDMRP New Investigator http://cdmrp.army.mil/

Department of Energy (DOE)
  Early Career http://science.energy.gov/early-career/

National Aeronautics and Space Administration (NASA)
  SMD New Investigator http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={AEF75D0F-2272-7DE7-D52A-295B47C8F5CF}&path=open
  AD Nancy Roman Fellowship http://science.nasa.gov/researchers/sara/student-programs/nancy-grace-roman-technology-fellowships-astrophysics-early-career-researchers/
  OCT Early Career http://www.nasa.gov/directorates/spacetech/strg/2012_space_tech_research_opps.html#.UeVDYoOxObl

Department of Education (ED)
  Early Career Development and Mentoring http://ies.ed.gov/funding/ncser_rfas/ncser_earlycareer.asp

Also see http://www.spo.berkeley.edu/fund/newfaculty.html and Pivot Community of Science http://pivot.cos.com/funding/search
Proposal Development  
NSF Vice Mission Agencies

**NSF**

1a. Interest in most S&E  
a proposal will “fit somewhere”

1b. Knowledge inspired - Bohr Quadrant  
more funding in science than in engn  
(but can include Pasteur when addressing topics of societal importance)

1c. Basic monies only, with tweaks such as  
I-CORP, I/UCRC, GOALI, SBIR/STTR

1d. Impact on S&E knowledge  
addressing national/Intl priorities useful

2. Additional requirements for:  
   Broadening Participation  
   Education, Underrepresented  
   Wider-scale Impact, International  
   Data Management  
   Post Doc Nurturing

3. Program officer triage for rule compliance  
   external proposal review by peer panel  
   except for EAGER, RAPID, INSPIRE

**Mission Agency (excluding NIH) - Basic Research**

Interest restricted to S&E for mission need  
a proposal **must** interest a program officer

Use inspired (agency mission) - Pasteur Quadrant  
more funding in engineering than in science

Basic, but applied monies may be also available  
(applied tends to have milestones and deadlines)

Impact on S&E knowledge **and**  
addressing agency mission priorities

Generally none - perform the promised research

Program officer will initially triage on basis of content  
Will select awardees with some (usually) reviewer input

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I/UCRC  
Industry University Cooperative Research Program

GOALI  
Grant Opportunities for Academic Liaison with Industry

EAGER  
Early Concept Grants for Exploratory Research

RAPID  
Rapid Response Research Grants

INSPIRE  
Integrated NSF Support Promoting Interdisciplinary Research and Education

I-CORP  
Innovation Corp

SBIR/STTR  
Small Business Innovative Research / Small Business Technology Transfer
[PROJECT-NAME] ACHIEVEMENT

MAIN ACHIEVEMENT:
- Placeholder explanatory text. Replace with text and diagrams as necessary.

HOW IT WORKS:
- Placeholder explanatory text paragraph. Replace with text and diagrams as necessary.

ASSUMPTIONS AND LIMITATIONS:
- Limitation or assumption.
- Another limitation or assumption.

CHARACTERIZE THE QUANTITATIVE IMPACT
(DELETE THIS BOX OF TEXT AND INSERT TABLE, GRAPH, OR OTHER SUITABLE VISUALIZATION)

END-OF-PHASE GOAL
(REPLACE WITH DIAGRAM/TEXT/THRESHOLD CRITERIA)
Primary answer here. Add more text as necessary.
- First key point.
- Additional as necessary.
Budget: FY?? - ?????,???

Transition Partners:

A Sentence Why It Is Important/Useful
Presidential Early Career Award Science and Engineering (PECASE)
http://en.wikipedia.org/wiki/Presidential_Early_Career_Award_for_Scientists_and_Engineers

Who:
• Nominations from participating Federal Agencies including:
• Candidates must hold tenure-track positions at U.S. Univ. or College or in Agency intramural laboratories
• Have received their Ph.D. degree within the preceding 5 years
• Typically each agency nominates candidates from its own young investigator/early career awardees and/or from its intramural laboratories

What:
White House award to recognize some of the finest scientists and engineers who, while early in their research careers, show exceptional potential for leadership at the frontiers of scientific knowledge during the twenty-first century.

How Much: ~$200K/yr for five years (cost borne by nominating agency)

When: Submitted in October by Agencies

<table>
<thead>
<tr>
<th>USC Awardees:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Mo El-Naggar AFOSR</td>
</tr>
<tr>
<td>2009</td>
<td>Andrea Armani ONR</td>
</tr>
<tr>
<td></td>
<td>Michelle Povinelli ARO</td>
</tr>
<tr>
<td>2008</td>
<td>Maria Calbi NSF</td>
</tr>
<tr>
<td>2007</td>
<td>Li Zhang NIH</td>
</tr>
<tr>
<td>2004</td>
<td>Elaine Chew NSF</td>
</tr>
<tr>
<td>2003</td>
<td>Cyrus Shahabi NSF</td>
</tr>
</tbody>
</table>
# Guide to Defense/Security Funding - Index to MAPS Charts

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<thead>
<tr>
<th>Chart #s</th>
<th>Topic</th>
</tr>
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<td>Contents</td>
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<td>Other Security Opportunities – DHS, Intelligence Community</td>
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<tr>
<td>16 - 104</td>
<td>DOD Agencies with Defense Research Science Line (DRS, 6.1)</td>
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<td>16 - 21</td>
<td>Overview</td>
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<td>22 - 35</td>
<td>By Academic Disciplines</td>
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<td>36 - 53</td>
<td>By Army</td>
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<td>54 - 64</td>
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<td>65 - 81</td>
<td>By Navy / Marine Corps</td>
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<td>By DARPA</td>
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<td>105 - 149</td>
<td>Other DOD Budget Lines for Basic Research</td>
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<td>By DTRA and CBDP</td>
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<td>119</td>
<td>By High Energy Laser (HEL)</td>
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<td>120 - 121</td>
<td>By University Research Initiative (URI, including MURI, DURIP)</td>
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<td>122 - 133</td>
<td>By Congressionally Directed Medical Research Program (CDMRP)</td>
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<td>134 - 135</td>
<td>By TATRC / Vision Research Program</td>
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<tr>
<td>136 - 149</td>
<td>By Misc (SERDP/ESTCP, 138-39; SBIR/STTR, 140-46; MINERVA, 147)</td>
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<td>150 - 167</td>
<td>Student / Faculty Education Opportunities (YIP, 150-58, NSSEFF, 167)</td>
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<td>Pointers for Successful DOD S&amp;T Funding</td>
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<tr>
<td>172+</td>
<td>Supplementary Information</td>
</tr>
</tbody>
</table>

To get copies of these charts, pertinent reports and other reference information go to:  
Central Desktop  http://www.centraldesktop.com/  
to login to the USC site, get username and password from nlwalker@usc.edu  
Revised 5/1/2013
DOD Young Investigator/Young Faculty Programs

**Who:** Outstanding new faculty members at institutions of higher education, to support their defense related research, and to encourage their teaching and research careers

Army, AF, Navy must be US citizen / permanent resident  
DARPA and DTRA have no citizenship or residency requirement

Army/AF/DTRA - received Ph.D. or equivalent degrees within the last five years  
Navy/DARPA – tenure track assistant/associate professors within 5 years of appointment  
Army, Navy and DARPA require tenure track positions

**What:** Topics must conform with agency interests

**How Much:**

Army - not to exceed $50K/yr for three years  
Air Force - $120K/yr for three years  
Navy - up to $170K/yr for three years, possibility of additional support for capital equipment or collaborative research with a Navy laboratory  
DTRA - $100K/yr for up to five years  
DARPA - up to $250K/yr for up to two years (with possible $500K for third year)

**When:**  
“Anytime” for Army  
Sep 15, 2013 for the Air Force FY14 competition (AFOSR BAA 2013-0005)  
Jan 3, 2014 for Naval FY14 competition (ONR BAA 14-001)  
Jan 13, 2014 for the DTRA CY14 competition (HDTRA1-11-16-BRCWMD-BAA)  
Jan 7, 2014 for the DARPA FY14 competition (DARPA RA 14-07)

**Where:** See BAAs on websites (identified in subsequent charts)

Listing of prior AF, Navy, DARPA awardee information available from DC Office for FY07-FY13
Army Young Investigator Award

**Who:** This program is open to resident aliens and U.S. citizens holding tenure track positions at U.S. universities and colleges who have held their graduate degrees (Ph.D. or equivalent) for fewer than five years at the time of application.

**What:** Attract to Army research outstanding young university faculty members, to support their research, and to encourage their teaching and research careers.

Strongly encourage informal discussions with the cognizant Army Research Office (ARO) technical program manager before submission of a formal proposal.

A supporting letter from the applicant's Department Chairperson, Dean, or other official who speaks for the university regarding support for and commitment to the applicant. Strong university support for the applicant is essential. This support can include the applicant's 9-month academic salary, release time from administrative responsibilities, the purchase of equipment, support for the applicant's graduate students, waiver of indirect costs, departmental cost sharing, start-up funding, and so on.

**How Much:** YIP awards not to exceed $50,000 per year for three years

**When:** Proposals may be submitted at any time.

**Where:** Broad Agency Announcement for Basic and Applied Scientific Research FY12 – FY17

W911NF-12-R-0012-02  YIP information on page 50

**USC Awardees**

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Fei Sha</td>
<td>CS</td>
</tr>
<tr>
<td>2009</td>
<td>Michelle Povinelli</td>
<td>EE</td>
</tr>
</tbody>
</table>
AF Young Investigator Award (YIP)

**Who:** The individual award will be made to a U.S. institution of higher education, industrial laboratory, or non-profit research organization where the principal investigator is employed on a full-time basis and holds a regular position.

The principal investigator must be a U.S. citizen, national, or permanent resident who has received a Ph.D. or equivalent degrees in the last five years (on or after 1 May 2008 for the FY14 competition)

**What:** foster creative basic research in science and engineering, enhance early career development of outstanding young investigators, and increase opportunities for the young investigators to recognize Air Force mission and the related challenges in science and engineering.

Proposals addressing the research areas of interest for the Air Force Research Laboratory will be considered. The basic research areas of current interest are available on-line at the AFOSR web site: http://www.wpafb.af.mil/AFRL/afosr/

**How Much:** The estimated value of each award is approximately $120K per year for three years. Exceptional proposals will be considered individually for higher funding level and/or longer duration (up to five years upon a successful review during the third year).

**When:** proposal due 15 Sep 2013 for FY14 competition (Solicitation released July 2013)

**Where:** Air Force Fiscal Year 2014 Young Investigator Research Program AFOSR-BAA-2013-0005

<table>
<thead>
<tr>
<th>Year</th>
<th>Awards Out of Proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2013</td>
<td>40 out of 192 proposals</td>
</tr>
<tr>
<td>FY 2012</td>
<td>48 out of 220 proposals</td>
</tr>
<tr>
<td>FY 2011</td>
<td>43 out of 202 proposals</td>
</tr>
<tr>
<td>FY 2010</td>
<td>38 out of 202 proposals</td>
</tr>
<tr>
<td>FY 2009</td>
<td>39 out of 210 proposals</td>
</tr>
</tbody>
</table>

**USC Awardees**

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>Jahan Dawlaty</td>
<td>Chem</td>
</tr>
<tr>
<td>2012</td>
<td>Morteza Dehghani</td>
<td>ICT</td>
</tr>
<tr>
<td></td>
<td>Greg Ver Steeg</td>
<td>ISI</td>
</tr>
<tr>
<td>2010</td>
<td>Mohamed El-Naggar</td>
<td>Physics</td>
</tr>
<tr>
<td>2008</td>
<td>Stephen Cronin</td>
<td>EE</td>
</tr>
<tr>
<td></td>
<td>Chunqiong Jiang</td>
<td>EE</td>
</tr>
</tbody>
</table>
Naval Young Investigator Program

Who: Principal Investigator of a proposal must be a U.S. citizen, national, or permanent resident (on the date proposals are due), in their first or second full-time tenure-track or tenure-track-equivalent academic appointment and for FY2014 have begun their first appointment on or after 01 Nov 2008

What: The objectives of this program are to attract outstanding faculty members of Institutions of Higher Education to the Department of the Navy's research program, to support their research, and to encourage their teaching and research careers.

Applications should contact a Program Officer, who is the point-of-contact for a specific technical area, to discuss their research ideas. Brief informal pre-proposals may be submitted to facilitate these discussions. Application will likely need a long CV with all evidence of leadership as opposed to the typical short biosketch, i.e. organizing conferences, other grants, etc... Also letters of support from dean and chair, including some evidence of commitment, e.g. small matching amount, teaching relief, ...

How Much: Proposals may request up to $170,000 per year for three (3) years. These funds may be budgeted against any reasonable costs related to the conduct of the proposed research, for example, salary for the Young Investigator, graduate student support, supplies, and operating expenses. Additional funds (beyond the basic $170,000 yearly amount) for capital equipment which enhances the Young Investigator's proposed research may be requested for the first budget period, based on the needs of the research. The basic $170,000 per year award can be supplemented through a "matching funds" enhancement available only to those receiving an ONR Young Investigator award.

When: proposal due 03 Jan 2014 for the FY14 competition (Solicitation released Aug 2013)

Where: Fiscal Year 2014 ONR Young Investigator Program, ONR BAA 14-001

USC Awardees

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Rahul Jain</td>
<td>EE</td>
</tr>
<tr>
<td></td>
<td>Andrea Hodge</td>
<td>CEMS</td>
</tr>
<tr>
<td></td>
<td>Noah Malmstadt</td>
<td>CEMS</td>
</tr>
<tr>
<td>2009</td>
<td>Andrea Armani</td>
<td>CEMS</td>
</tr>
<tr>
<td>2008</td>
<td>David Kempe</td>
<td>Computer Sci</td>
</tr>
</tbody>
</table>

FY13 - 16 out of 369
FY12 - 26 out of 310
FY11 - 21 out of 270
FY10 - 17 out of 211
FY09 - 15 awards out of 193 proposals
DEFENSE THREAT REDUCTION AGENCY (DTRA)
Research and Development Enterprise
Basic and Applied Sciences Directorate

Who: Faculty who received a Ph.D. or equivalent degree within 5 years of date of the pre-application white paper submission. No requirement for US citizenship or permanent residency

What: Proposals that focus on exploratory aspects of a unique problem, a high risk approach, or innovative research in subjects with potential for high impact to CWMD science in the topics for Period D (2014):

- PerD-YIP-Topic 1: Refractory Debris Dissolution Techniques for Nuclear Forensic Field Procedures
- PerD-YIP-Topic 2: Photodetectors and Solid-State Neutron Sensors for Radiation Detection
- PerD-YIP-Topic 3: Sensing of Radiation Shielding Materials and Exploiting Interactions with Radiation from Radiological and Nuclear Sources
- PerD-YIP-Topic 4: Development of Extremely Rapid Control Strategies for Mitigation of Cascading Failures on Multi-layer/Multi-dependent Dynamic Networks
- PerD-YIP-Topic 5: Improved Semantic Analysis Theory to Identify WMD-Related Activities
- PerD-YIP-Topic 6: Area of Responsibility Centric Cultural Modeling for WMD Threat Detection
- PerD-YIP-Topic 7: Interrogation of Mechanisms for Cellular Resistance to Radiation Damage using Melanized Fungi as Model Systems
- PerD-YIP-Topic 8: Basic Science of Radiation Effects in Micro/Nanoelectromechanical Systems MEMS/NEMS
- PerD-YIP-Topic 9: Crustal-Earth Materials and Manufactured Materials under Dynamic Extremes
- PerD-YIP-Topic 10: Energetic Materials for CWMD
- PerD-YIP-Topic 11: Smart Materials with Unconventional Indicators for Facility Access Denial and Security of WMD Materials

When: 13 Jan 2014   Phase I White Paper Submission Deadline for Period D

How Much: $100K/yr for up to five years

Where: Basic Research for Combating Weapons of Mass Destruction (C-WMD)
HDTRA1-11-16-BRCWMD-BAA Amendment 3 - Dec 2013 (Period D)

In 2011 competition ~15 awards
In 2009 competition ~15 awards
Defense Advanced Projects Agency (DARPA) Young Faculty Award

Who: Participation is limited to untenured Assistant or Associate Professors within 5 years of appointment to a tenure-track position at a U.S. institution of higher learning. DARPA is particularly interested in identifying outstanding researchers who have previously *not been performers on DARPA programs, but the program is open to all qualified applicants with innovative research ideas.* There is no prohibition against a non-U.S. citizen/a Permanent Resident/here on a Green Card/etc., from submitting a proposal for consideration; nor is it a requirement of the RA that the submitter be eligible to obtain a U.S. security clearance.

What: The YFA program will provide high-impact funding to these faculty early in their careers in order to develop their research ideas in the context of Defense needs. The announcement contains detailed descriptions of the specific interest areas to be addressed. The RA solicits ground-breaking single investigator proposals for research and development in the areas of Physical Sciences, Engineering, Mathematics, Medicine, Biology, Information and Social Sciences of interest to DARPA’s Defense Sciences Office (DSO), and Microsystems Technology Office (MTO). Proposed research should focus on innovations that will enable revolutionary advances; high-risk/high-payoff ideas are strongly encouraged. Proposers should familiarize themselves with and address the Heilmeyer Catechism

Topic POCs are unable to accommodate any meetings/calls; you may send questions to DARPA-RA-14-07@darpa.mil.

How much: Two years of funding at $250,000 each year. Of the entire 2014 YFA class, four of the most promising recipients may be selected for a third year supported by $500,000 each in funding. Each recipient will be assigned a DARPA program manager with closely aligned research interests.

When: Proposals due January 21, 2013 for the FY14 competition (Solicitation released Nov 2013)

Where: Research Announcement Young Faulty Award, DARPA-RA-14-07

<table>
<thead>
<tr>
<th>Year</th>
<th>Awards</th>
<th>Proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY13</td>
<td>25</td>
<td>226</td>
</tr>
<tr>
<td>FY12</td>
<td>51</td>
<td>560</td>
</tr>
<tr>
<td>FY11</td>
<td>33</td>
<td>405</td>
</tr>
<tr>
<td>FY10</td>
<td>31</td>
<td></td>
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</tbody>
</table>

USC Awardees

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Andrea Hodge</td>
<td>CEMS</td>
</tr>
<tr>
<td></td>
<td>Yongseung Yoon</td>
<td>CEMS</td>
</tr>
<tr>
<td>2008</td>
<td>Hossein Hashimi</td>
<td>EE</td>
</tr>
</tbody>
</table>
Anecdotes on Competing for DOD YIP Funding

Thursday, April 29, 2010 Web posting

NSF funding isn't enough to maintain a group. While some focus on NIH, in my field, going to DoD (army, navy, air force) is the way. All three branches of DoD have young investigator programs (YIPs). To be eligible, you have to be a U.S. citizen, and you must be no more than 5 years out from your PhD. These requirements whittle down the playing field, so your chances of being funded - if you're eligible - are seemingly high. (Although the last ONR YIP funding rate was < 10%, sigh).

The problem is with getting your foot in the door. For NSF, you can submit an idea - your idea with whatever application you like. But for DoD, you need to bounce ideas off of the program manager to find what fits into their program. If you've got a great idea but it doesn't fit in with the goals of DoD, then it won't get funded. So in other words, communicating with a program director prior to submission is critical.

Now for the YIP. I am exceedingly frustrated with the way program managers in DoD uniformly ignore young investigators - even those inquiring about YIP. You can call, email, send in unsolicited white papers, and there is a brick wall of silence. It's not just me. Mr. JP has the brick wall. Colleagues get the brick wall. So then, I ask, who is getting these YIPs? I talked with one colleague who is a star, and he gets the brick wall from other military branches. With this particular YIP that he got, someone actually wrote back. Other advice is to arrange appointments with the PMs when you are in DC. That's a great idea, and I would love for that to happen. But my emails and calls saying, "Hey, I'm in your neck of the woods, let's talk," get ignored.

Comments contributed to the above posting:
1. I got the ARO young investigator. Like you, most of the people I called or emailed ignored me. I repeatedly called or emailed until I got one or two on the phone, but they were not terribly interested. Eventually, I found a program manager who I had met before at a conference. When I called him, he remembered seeing my talk, was very friendly, and was interested in my applying for the YIP. Don't worry, keep persisting. Use any connection you can find -- ask your postdoc advisor and grad school advisor who they are funded by and if they can send an email introducing you. For DARPA, I believe it is less dependent on the program manager as all applications are handled by one person, rather than different applications going to the PM closest to that field. PS: DARPA PM's are not supposed to talk to you about the YIP in particular. I got a very cold brush-off when I tried it. This is different from the usual modus operandi for seed grants and other DARPA funding. ONR, ARO and AFOSR PM's will in principle talk to you if you can get a hold of them.

2. To get any of the DOD young investigator awards, you must make a connection with the PM. They have to *want* to fund you as part of their program, as these awards are usually partly YIP funds partly PM's program's funds. You ought to go to Washington and talk to the PM in person, email white papers, etc., and cultivate a relationship, otherwise it's a no go. A good way is to be introduced to a PM by a senior well funded colleague. Then you start emailing the PM and try to deepen the relationship. It takes time but is worth it. I don't think any of them are particularly easy to get a hold of, though, so don't take it personally if the don't answer email or voicemail.
Career Development Award - an example - Peer Reviewed Cancer Research Program (PRCRP)

**Principal Investigator:** Independent investigator at the level of Assistant Professor or equivalent at the time of the award
- Research with emphasis in discovery must be in one or more of the FY12 PRCRP Topic Areas
- Supports investigator in the early stages of their career (within 5 years for first faculty appointment)
- Preliminary data not required
- Clinical trials will not be supported
- Maximum funding for the entire period of performance is $240,000 for direct costs (plus indirect costs)
- Maximum period of performance is 2 years

**Historical Record for Career Development Awards:**
- Peer Reviewed Cancer (PRCRP) 2013, 2012
- Peer Reviewed Orthopedic (PRORP) 2010
- Ovarian Cancer (OCRP) 2009, 2008
- Prostate Cancer (PCRP) 2009, 2008
- Neurofibritosis (NFRP) 2002
- Breast Cancer (BCRP) 2001, 2000
New Investigator Award - an example - Neurofibratosis Research Program (NFRP) 2012

**Principal Investigator:** An independent investigator at or below the level of Assistant Professor (or equivalent). Please note that graduate students, postdoctoral fellows, and other “mentored” researchers are not eligible for this award; or an established independent investigator in an area other than NF at or above the level of Assistant Professor seeking to transition into a career in NF research.

- Must not have received more than $300,000 in total direct costs for NF research as a PI of one or more federally funded, non-mentored peer reviewed grants;
- Must not have received a New Investigator Award previously from any program within the CDMRP

New Investigator Award applications must include preliminary data that is relevant to NF and the proposed project

- Maximum funding for the entire period of performance is $400,000 for direct costs (plus indirect costs)
- Maximum period of performance is 3 years

**Historical Record for New Investigator Awards:**

- Neurofibratosis (NFRP) 2012 - 2006
- Bone Marrow Failure (BMFRP) 2010
- Prostate Cancer (PCRP) 2009 - 2006
- Peer Reviewed Cancer (PRCRP) 2009
Defense Sciences Study Group (DSSG)
DARPA/IDA http://dssg.ida.org/index.html

Who:
- Faculty member in science, engineering, or related discipline, preferably within 15 years of PhD
- Outstanding academic accomplishments and likely future leader
- Must be a U.S. citizen able to acquire a security clearance

What: The Defense Science Study Group (DSSG) seeks to develop and maintain strong links between the national security community and emerging leaders in the fields of science and technology. The DSSG identifies the nation’s most outstanding scientists and engineers early in their careers, educates them on national security issues, and fosters their long-term interest and involvement in the national security community. Over the course of the two-year program (approximately 20 days/year), those invited to participate focus on defense policy, related research and development, and the systems, missions, and operations of the armed forces. Over the course of 8 sessions, spread out over the two years, members interact with top-level officials from the Defense Department, as well as senior officials of other government organizations such as the Department of Energy, various intelligence agencies, and Congress. The program has also produced over 200 national defense-related research projects.

How Much: ?

When: Nominations for DSSG 2016-2017 will be accepted through Dec 2014.

Where: Forward your resume or CV and a letter of recommendation from your Provost, Dean or Defense Science Study Group Member, Mentor, Alumni or Advisor, through the following mail or email address:

Institute for Defense Analyses
ATTN: DSSG Nominations
4850 Mark Center Drive
Alexandria, VA 22311-1882
Email: dssg@ida.org

Dr. Robert E. Roberts
Chief Scientist IDA
703.845.2100
rr roberts@ida.org

Dr. Matthew Goodman
DARPA DSO
571 218 4681
matthew.goodman@darpa.mil

USC Awardees:
2010-11 John Heidemann  ISI
Guide to Dept of Energy Funding - Index to MAPS Charts

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To get copies of these charts, pertinent reports and other reference information go to:
Central Desktop  http://www.centraldesktop.com/
to login to the USC site, get username and password from nlwalker@usc.edu

updated July 2013
DOE Office of Science
FY2014 Early Career Research Program

Who:
• Principal Investigators are within 10 years of receiving a Ph.D. from year of solicitation, and are either untenured assistant on the tenure track, or untenured associate professors on the tenure track at a U.S. academic institution.
• No limit on U.S. citizenship
• A PI may not participate in more than three Office of Science Early Career Program competitions

What: The purpose of this program is to support the development of individual research programs of outstanding scientists early in their careers and to stimulate research careers in the areas supported by the DOE Office of Science. Letters of recommendation are not allowed. A department chair letter is not required and should not be included.

The Early Career Research Program supports efforts in the following program areas: Advanced Scientific Computing Research (ASCR); Biological and Environmental Research (BER); Basic Energy Sciences (BES), Fusion Energy Sciences (FES); High Energy Physics (HEP), and Nuclear Physics (NP). Details in the program announcement.

How Much: The minimum award size is $150,000 per year for five years for universities. The university award is intended to pay up to three months’ summer salary for the Principal Investigator (PI) to supplement the normal, academic-year salary.

When: Preapplication (white paper, required)

Where: DE-FOA-0000958

FY 2013 released July 20, 2012 - white paper due 6 Sept 2012; 65 (44 Univ) selected out of 770 proposals
FY 2012 released July 19, 2011 - white paper due 1 Sept 2011; 850 under review; 68 selected (43 Univ)
FY 2011 69 awardees out of 1150 proposals

No USC Awardees as of 2013; listing of all prior awardee information available from DC Office.
Guide to **NASA** Research: Index to MAPS Funding Charts

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to login to the USC site, get username and password from nlwalker@usc.edu

Updated July 2013
NASA Science Mission Directorate
Young Investigator Program in Earth Science

Who: Tenure or non-tenure track University position; U.S. citizen or have lawful status of permanent residency (i.e., holder of a U.S. Permanent Resident Card, also referred to as the Green Card). He/she must be a recent Ph.D. recipient, defined as having graduated on or after January 1 of the year that is no more than five years before the issuance date of the ROSES NRA.

What: The New Investigator Program (NIP) in Earth Science is designed to encourage the integration of Earth system research and education by scientists and engineers at the early stage of their professional careers. The program encourages scientists and engineers at academic and/or research institutions to develop a broader sense of responsibility for effectively contributing to the improvement of science education and public science literacy; it provides an opportunity for the investigators to develop partnerships and/or enhance their skills, knowledge, and ability to communicate the excitement, challenge, methods, and results of their work to teachers, students, and the public.

The Earth Science Division places particular emphasis on the investigators' ability to promote and increase the use of space-based remote sensing through the proposed research and education projects.

The research Focus Areas appropriate for the NIP are: Carbon Cycle and Ecosystems; Climate Variability and Change; Water and Energy Cycle; Atmospheric Composition; Weather, and Earth Surface and Interior.

How Much: Awards range between $80-$120K per year for a period of up to three years.

When: Competed in alternate years (NOI 28 Jun 2013 for 2013 Solicitation)

Where: NRA: Research Opportunities in Space and Earth Sciences (ROSES) - 2013 NNH13ZDA001N
Who: The PI must be a recent Ph.D. recipient, defined as having graduated on or after January 1 of the year that is no more than seven years before the issuance date of this STRO-ECF NRA (i.e., after January 1, 2005). The PI must be an untenured Assistant Professor on the tenure track at the sponsoring U.S. university at the time of award. The PI must be a U.S. citizen or have lawful status of permanent residency (i.e., holder of a U.S. Permanent Resident Card, also referred to as a Green Card).

What: areas closely aligned with NASA's Space Technology Roadmaps and priorities identified by the National Research Council. These priorities include extending and sustaining human activities beyond low Earth orbit, exploring the evolution of the solar system and potential for life elsewhere, and expanding our understanding of Earth and the universe.

How Much: $200,000 per year for as long as three years

When: Notice of Intent by 30 March 2012

Where: Solicitation NNH12ZUA003N (FY2012) All proposals must be submitted electronically through NSPIRES or through Grants.gov (www.grants.gov)
Guidance to **Dept of Education (ED) Research Funding**

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Updated Apr 2013
Who:
- Eligible Principal Investigators (PI) must have completed their doctoral degree or postdoctoral program within 3 years of the application due date.
- Eligible PIs must hold a tenure-track position (e.g., Asst Prof) at an institution of higher education, or must have accepted an offer for such a position to begin before the start of the award.
- Eligible PIs may not have been a PI or co-PI on a research grant from the Institute in the past.
- Eligible PIs may be from any one of a variety of relevant disciplines and fields in addition to special education (e.g., general education, human development, political science, psychology, sociology, statistics) within institutions of higher education provided that their focused research and mentoring is in the field of special education or early intervention.

What:  Supports new investigators in special education and early intervention during their first years in institutions of higher education. The Early Career Development and Mentoring Program is designed to provide new investigators support to further develop methodological, content, and grant writing expertise needed to develop a strong line of research that includes federal funding. An important aspect of this program is the requirement that the research and training be guided closely by an experienced scientist. The program intends to provide new investigators with protected time in their faculty positions during which they can concentrate more intensively on developing research skills and their program of research.

How Much: up to $400K for up to 4 years

When: Letter of Intent due 19 Jul 2012

Where: CFDA 84.324B
Postdoctoral Fellowships
Selected Opportunities

Science.gov
http://www.science.gov/internships/graduate.html

Pivot COS
http://pivot.cos.com/funding/search

DOD/EPA/FHWA/NIST
NRC Research Associateship Program
http://sites.nationalacademies.org/pga/rap/
http://nrc58.nas.edu/RAPLab10/Opportunity/Programs.aspx

ASEE
http://www.asee.org/fellowship-programs/post-doctoral

NASA
Fellowships for Early Career Researchers - ROSES 2013 C-20, 21
Nancy Grace Roman Technology Fellowships in Astrophysics for Early Career Researchers - ROSES 2013 D-9
National Space Biomedical Research Institute Fellowships - NSBRI-RFA-12-03

NSF
Arctic Research Opportunities
Atmospheric and Geospace Sciences Postdoctoral Research Fellowships
Centers of Research Excellence in S&T (CREST) and HBCU Research Infrastructure for S&E (RISE)
GeoPrisms Program
International Research Fellowship Program
Mathematical Sciences Postdoctoral Research Fellowships
NSF Astronomy and Astrophysics Postdoctoral Fellowships
NSF Earth Sciences Postdoctoral Fellowships
NSF Fellowships for Transformative Computational Science using CyberInfrastructure
NSF Science, Engineering and Education for Sustainability Fellows
Ocean Sciences Postdoctoral Research Fellowships
Pan-American Advanced Studies Institutes Program
Postdoctoral Fellowships in Polar Regions Research
Postdoctoral Research Fellowships in Biology
SBE Postdoctoral Research Fellowships
ASEE/NSF Corporate Postdoctoral Fellowship for Engineers
Intelligence Community (IC) Postdoctoral Research Fellowship Program