Proposal Preparation for a Mission Agency
Young Investigator/Early Career Opportunities
Where to Look and How to Pitch

Dr. James S. Murday
DC Research Strategy and Development (RSD)
University of Southern California
202 834 3969
murday@usc.edu
40 years at NRL, ONR, DDRE - chem, phys, materials, electronics
18 years at USC

Also see http://www.spo.berkeley.edu/fund/newfaculty.html
USC DC Research Advancement Office
Services

Research Funding
- Research initiative e-mail alerts
- Collaborations across schools, other institutions
- Federal funding agency advocacy
- Representation at DC area events
- Strategically targeted activities
- Proposal preparation - editorial and scientific contributions
- Repository with Mission Agency Program Summary (MAPS) resources
  - Federal Agency Funding Guides
  - Program/Program Officer database
  - Database with listings of prior early career/young faculty awardees
- Constructive technical observations/suggestions on proposal drafts

Visibility/Prestige
- (Inter)national conferences / workshops
- Strategic partnerships
- Advisory/planning committees

Faculty Development
- Grant-preparation workshops
- Arrange seminar/colloquia – staff from DC Office, federal funding agencies
Presentation Outline

How to identify pertinent Agency program officers and sell your ideas

Insights from Eli Levenson-Falk (AFOSR and ONR YIP awards)

Perspectives on various agency early career / young faculty programs

National Science Foundation (NSF)
National Institutes of Health (NIH)

1. Dept of Defense (DOD)
2. Department of Energy (DOE)
3. National Aeronautics and Space Agency (NASA)
4. Environmental Protection Agency (EPA)
5. Department of Justice (DOJ)

Other Pertinent Center of Excellence in Research (CER) Workshops
Dr. Paul Ronney  Writing Compelling NSF Proposals
Dr. Steven Moldin  How to Obtain NIH Funding
Ms. Bonnie Lund  Writing Winning Proposals; Revising Strategies for Proposal Success
Dr. James Murday  Developing a Successful Mission Agency Grant
Suggestions for Success

Have a multi-year plan for your Career - what would you like to be doing in 15 years.

Get to know the Agency Program Officer and his/her program interests - crucial in Mission Agencies

Know the Agency’s review process

Participate on a proposal review panel (if available). No better way to appreciate what constitutes a credible proposal for that agency / program officer. As examples at NSF:

Are you interested in helping NSF review proposals? Many NSF programs search for volunteer reviewers. Some, like "Build and Broaden" and "Perception, Action and Cognition" invite you to fill out a survey to express your interest in volunteering. CIVIC has a sign up URL. For other programs, consult the program web page and email a program officer to see if they are recruiting reviewers.

Participate in Agency activities - workshops, annual program meetings,…

Meet with POs at Science/Engineering Professional Society Meetings

Utilize the USC Center for Research Excellence workshops on proposal development

Use your colleagues and the RSD staff to critique / guide your proposal
Program Officer (PO)

Program Officer – Program Officer – Program Officer

Know your program officer - RSD can provide data sheets with pertinent info

Program officers have variable latitude at project level (depending on agency)

(higher DOD - DOE - NASA - NIH - NSF lower)

Their reputation / professional advancement is tied in part to your success

Make contact with a Program Officer before submitting a white paper or proposal

• Be informed - read the descriptive paragraph on the website/announcement, the PO datasheet, and information on prior awards (sometimes available from DC office)

• Use email “elevator pitch” to open contact, gain attention - your unique idea and its potential impact (S&E and societal, i.e., who will care about your results)

• Be ready for a dialogue - not monologue - the goal is to align PO/PI perspectives

• Plumb his/her current interest – website paragraphs are likely dated. This can significantly enhance your prospects by tailoring your ideas to the PO’s interests

• If lukewarm/disinterested response, ask for suggestions on other POs who might be interested

Watch for new Program Officers - they will be interested in creating “their” program
Project Officer Background:
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
BA in Biology and Chemistry from Oberlin College
PhD in Immunology from the University of Pennsylvania

Program:
Stress Response
Discover the factors that predict differences in stress reactivity among individuals and subsequently explore the biological mechanisms of stress vulnerability and stress resilience for prevention and effective treatment of stress-related disorders.

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 Publications Reflecting Project Officer 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
What to Say - and Not Say - to Program Officers

“most scholars and researchers would rather undergo a root canal without anesthesia than call a program officer”

Shalts
1. Do your homework
2. Send short email first, summarizing issue(s)
   • Be as specific as possible
   • Concentrate on big picture, especially outcomes
   • Why should they be excited by your proposed work (and its outcomes)
     Ask for PO to call you (with your available dates/times) or to email you back with suggestions on when to contact him/her
3. When in doubt, ask

Shalt Nots
1. Do not call at the office “just to chat”
2. Do not cold call
3. Do not pester - but be persistent

Adapted from Michael Spires, Office of Sponsored Projects, Smithsonian Institution
Anecdotes on Competing for DOD YIP Funding
Thursday, April 29, 2010 Web posting

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 they don't answer email or voicemail.**
How to pitch an idea

Prepare three versions of your pitch: 5 seconds, 30 seconds, and 5 minutes.

The 5-sec version (AKA elevator pitch) is a concise single-sentence formulation of your idea.

- DISCOVERING DNA: I am working to explain how human cells reproduce.
- INVENTING LIGHTBULBS: I am making light from electricity.
- IMPROVING ANTILOCK BRAKE ALGORITHMS: I am making cars safer to drive.

The 30-sec version (AKA extended elevator pitch) has the time to talk about how you will achieve what you described, or provide specifics for the most significant things people will want to know.

The 5-min version starts with your 5 sec pitch, then provides the next level of detail, and, finally, provides a point-by-point detailing of how you will achieve what you described in the first sentence.

Test the pitch  Find smart, honest people who will give you feedback.

Adapted from Jill Dalhburg, NRL who referenced The Myths of Innovation by Scott Berkun, O’Rielly Press, August 2010
If given the opportunity
Presentation to a sponsor

- **Address the Heilmeier questions-but in the context of the Agency**
- Stay on time.
- Dress appropriately.
- Be well-rehearsed.
- Prepare to be interrupted and asked what you think may be obvious questions.
- Listen to the input from your audience, and do not argue with, or talk down to, any of the attendees.
- Keep control.

**EXUDE POSITIVE ENERGY, ENTHUSIASM, AND VISION**
Successful proposals convince the sponsor that:

- The research is very important
- It is directly related to the sponsoring Agency mission, and to the sponsor's solicitation
- The proposal methodology is both feasible and appropriate
- The proposers will deliver valuable results
- It is well worth the investment

From Jill Dahlburg, NRL
What Makes a Strong Proposal?

- New and original ideas *(what?)*
- Sound, succinct, detailed focused plan *(how?)*
- Preliminary data and/or feasibility calculations
- Relevant experience *(why me/us?)*
- Important & timely within field *(why now?)*
- Clarity concerning future direction *(so what?)*
- Well-articulated broader impacts specific to this project
The Heilmeyer Catechism
Questions New Program Pitches Must Answer

- What are you trying to do? Articulate your objectives using absolutely no jargon
  - Example: “take anthrax off the table as a threat to our forces”
  - What is the new military capability that Semantic Web Services could provide?
- How is it done today, and what are the limits of current practice?
  - Why is this specifically a technology problem?
- What's new in your approach and why do you think it will be successful?
  - All software is Turing-equivalent, so software methodology is usually not relevant
  - What is your argument/analysis that a 10x difference in a technology will result in a new capability?
- Who cares? If you are successful, what difference will it make?
  - Who is the customer for the new idea, and what evidence do you have that any transition will be successful?
- What are the risks and the payoffs?
- How much will it cost? How long will it take?
- What are the midterm and final exams to check for success?
  - Metrics and experimentation plans defined up front
Keys to a Compelling Proposal
adapted from
George Hazelrigg, NSF Program Officer
Paul Ronney, USC AME, Active Researcher and Reviewer
S. Joseph Levine, Michigan State, Emeritus Professor

Hazelrigg
Know the program you are engaging
Pay attention to program requirements
Know the review process

Frame your project around others work
Formulate an appropriate objective
State your research objective clearly
Develop a viable research plan

Ronney
What has been done / its deficiencies
At least one really novel, clever idea
Don’t say “just trust me”
Pose specific, testable hypotheses
Avoid kitchen sink mentality - what is key
Where’s the beef
Explain your end game - outcome(s)

Levine
How extend prior work
Needs an original idea
Strong rationale
Focused Proposal
Problem must be important
Well defined outcomes

Know Yourself
Appropriate experience/resources - but
don’t dwell on your past work

Format and brevity are important
Grammar and spelling count

Proofread your proposal before it is sent
Submit on time and
confirm its correct transmission

A picture is worth a thousand words
Clear Writing
Honing your Proposal Writing Skills
Adapted from
George Hazelrigg, NSF Engineering

A. A clear, crisp statement of your research objective will not only help you write a better research approach section in your proposal, it will, by itself, raise your rating.

Put your research objective right up top in your proposal

I know of only four ways to state a research objective.
1. "The research objective of this proposal is to test the hypothesis H."
2. "The research objective of this proposal is to measure parameter P with accuracy A."
3. "The research objective of this proposal is to prove the conjecture C."
4. "The research objective of this proposal is to apply method M from disciplinary area D to solve problem P in disciplinary area E." This research integrates knowledge from one disciplinary area into another. To do this often involves the resolution of inconsistencies across the disciplines.

The very statement of your research objective should lead you directly to your methodology. If it does not, you don't have a clear statement of research objective.

B. Typical problems with proposals include:

5. Failure to follow submission guidelines - NSF, for example, will return without review proposals that do not follow guidelines published in their Grant Proposal Guide. If you're going to take a month or two of your life to write a proposal, I strongly advise that you take an hour to read the GPG. If you are submitting to another agency, read their proposal guidelines carefully.

6. Use of small fonts and illegible materials - It makes no sense whatever to submit a proposal in a format that cannot be read. As many as half the proposals received at NSF include totally illegible materials, particularly figures and tables, where fonts have been compressed to micron sized grey blobs. I strongly recommend only approved 12-point fonts and nothing smaller, including tables and figures. Smaller only aggravates the reviewers. Use smaller fonts only if you want a lower rating.

7. Misspellings and poor grammar are commonplace - I find that about one in thirty proposals (give or take) has a misspelling in the title. This is a degree of sloppiness that does not impress reviewers. Bad grammar simply makes the proposal difficult to read. NSF (and most other Federal agencies) do not use grammar as a review criterion, but I'm here to tell you that it counts. It really doesn't matter how good your idea is if the reviewers can't understand it.

These things are so obvious that you may be wondering why I bother to note them. Well, I note them because upwards of two-thirds of the proposals I see have substantial problems in at least one of these three areas.
Proposal Development  
NSF Vice Mission Agencies

NSF (excluding TIP)

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

1b. Knowledge inspired  
   more funding in science than in engineering

1c. Basic monies only

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

2. **Additional requirements** for:  
   - broadening participation, DEI  
   - data management  
   - outreach/education  
   - wider-scale Impact, International  
   - post doc nurturing

3. **Program officer triage for rule compliance**  
   **Program officer triage on basis of content / interest**

4. Review by panel  
   except for EAGER, RAPID

Mission Agency - Basic Research

Interest restricted to S&E pertinent to mission need  
the proposal must interest the program officer

Use inspired (agency mission)  
likely 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 essential

**Perform the promised research**  
DEI now included by many Federal Agencies  
data management

---

TIP  
Directorate for Technology, Innovation and Partnerships, includes  
I/UCRC  
Industry University Cooperative Research Program  
GOALI  
Grant Opportunities for Academic Liaison with Industry  
I-CORP  
Innovation Corp  
SBIR/STTR  
Small Business Innovative Research / Small Business Technology Transfer  

EAGER  
Early Concept Grants for Exploratory Research  
RAPID  
Rapid Response Research Grants
Generic Advice about PO / PI Interaction

Program Officers
One of their functions is to represent YOUR work;
They may not have time to think deeply about the specific details of your concepts (because they are busy defending your resources)

Help them with their requests to you
Provide good slides, prompt reporting
Don’t chew up their time with silly things

Everyone prefers to work with people they trust (& respect), so keep up the good work, and the professional relationships

Adapted from Jill Dahlberg, NRL
A Perspective from a successful USC Faculty

Dr. Eli Levenson-Falk
Assistant Professor of Physics and Astronomy & Electrical and Computer Engineering
2021 ONR YIP
2018 AFOSR YIP
Where to Look for YIP/Early Career Programs

National Science Foundation  https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503214
National Institutes of Health  https://researchtraining.nih.gov/career/early-career
  https://public.csr.nih.gov/ForReviewers/BecomeAReviewer/ECR

Department of Defense (DOD)
- AFOSR YIP  https://community.apan.org/wg/afosr/w/researchareas/12792/young-investigator-program-yip/
- DARPA Young Faculty  https://www.darpa.mil/work-with-us/for-universities/young-faculty-award
- CDMRP Early Investigator

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

Nuclear Regulatory Commission (NRC)
- Faculty Development Grant  https://www.nrc.gov/about-nrc/grants.html

National Aeronautics and Space Administration (NASA)
- SMD Early Career Opportunities
- AD Nancy Roman Fellowship  https://science.nasa.gov/researchers/sara/fellowship-programs/nancy-grace-roman-technology-fellowships-astrophysics-early-career-researchers

Environmental Protection Agency (EPA)
- https://www.epa.gov/research-grants/research-funding-opportunities

Department of Education (ED)

Department of Justice - National Institute of Justice
- Young Investigator/Early Career included in many solicitations
Where to Look for YIP/Early Career Programs
NSF and NIH

National Science Foundation (NSF) - Paul Ronney CER presentation for NSF
CAREER https://beta.nsf.gov/funding/opportunities/faculty-early-career-development-program-career
CISE CAREER Workshop https://www.nsf.gov/cise/workshops/career/
Chem Division Early Career Investigator Workshop
https://www.nsfcareerworkshop.com/

MPS Ascend Faculty Catalyst Awards
https://new.nsf.gov/funding/opportunities/mathematical-physical-sciences-ascending-faculty

National Inst of Health (NIH) - Steve Moldin CER presentation for NIH
New and Early Stage Investigator http://grants.nih.gov/grants/new_investigators/index.htm
Career Development Award https://researchtraining.nih.gov/career/early-career
Director Early Independence Award https://commonfund.nih.gov/earlyindependence
Presidential Early Career Award Science and Engineering (PECASE)
http://en.wikipedia.org/wiki/Presidential_Early_Career_Award_for_Scientists_and_Engineers

Who:
• Nominations **only by participating Federal Agencies** including:
• Nominees must hold tenure-track positions at U.S. Univ. or College or at Agency intramural laboratories
• Must be U.S. citizen, national or permanent resident
• Some agencies require less than 5 years from highest degree
• 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
Last awards were in 2019

<table>
<thead>
<tr>
<th>USC Awardees:</th>
<th>2012</th>
<th>Mo El-Naggar</th>
<th>AFOSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>Andrea Armani</td>
<td>ONR</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Michelle Povinelli</td>
<td>ARO</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Li Zhang</td>
<td>NIH</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Elaine Chew</td>
<td>NSF</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Cyrus Shahabi</td>
<td>NSF</td>
<td>23</td>
</tr>
</tbody>
</table>
# Guide to Defense/Security Funding - Index to MAPS Charts

<table>
<thead>
<tr>
<th>Chart #s</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 2</td>
<td>Contents</td>
</tr>
<tr>
<td>3 - 22</td>
<td>Overview Perspectives, including suggestions on working with DOD Program Officers</td>
</tr>
<tr>
<td>23 - 38</td>
<td>By Academic Disciplines</td>
</tr>
<tr>
<td>39 - 45</td>
<td>Air Force Office of Scientific Research (AFOSR)</td>
</tr>
<tr>
<td>46 - 54</td>
<td>Army Research Office (ARO)</td>
</tr>
<tr>
<td>55</td>
<td>Army Corp of Engineers</td>
</tr>
<tr>
<td>56 - 59</td>
<td>Army Medical Research and Materials Command (AMRMC)</td>
</tr>
<tr>
<td>60</td>
<td>Army Research Institute for Behavioral and Social Science (ARI)</td>
</tr>
<tr>
<td>61 - 74</td>
<td>Office of Naval Research (ONR)</td>
</tr>
<tr>
<td>75 - 76</td>
<td>Naval Post-Graduate School (NPSG)</td>
</tr>
<tr>
<td>77 - 109</td>
<td>Defense Advanced Research Projects Agency (DARPA)</td>
</tr>
<tr>
<td>110 - 113</td>
<td>Defense Threat Reduction Agency (DTRA)</td>
</tr>
<tr>
<td>114</td>
<td>High Performance Computing</td>
</tr>
<tr>
<td>115</td>
<td>MINERVA (social science)</td>
</tr>
<tr>
<td>116 - 119</td>
<td>University Research Initiative (URI, including MURI, DURIP, NDSEG)</td>
</tr>
<tr>
<td>120 - 122</td>
<td>Defense Medical Research and Development Program (DMRDP)</td>
</tr>
<tr>
<td>123 - 130</td>
<td>Congressionally Directed Medical Research Program (CDMRP)</td>
</tr>
<tr>
<td>131</td>
<td>US Department of Veterans Affairs</td>
</tr>
<tr>
<td>132</td>
<td>University Affiliated Research Centers</td>
</tr>
<tr>
<td>133 - 139</td>
<td>Young Investigator / Early Career</td>
</tr>
<tr>
<td>140 - 141</td>
<td>Vannevar Bush Faculty Fellow (was NSSEFF)</td>
</tr>
<tr>
<td>142</td>
<td>DOD I-Corps</td>
</tr>
<tr>
<td>143</td>
<td>Defense Sciences Study Group (DSSG)</td>
</tr>
<tr>
<td>144</td>
<td>STEM Education - SMART</td>
</tr>
</tbody>
</table>
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, Air Force (AF), Navy must be US citizen / permanent resident

Army/AF/Navy - received PhD or equivalent degree within a specified timeframe (~5-8 years)
DARPA – tenure track assistant/associate professors/tenured faculty within 3 yrs of tenure date
Army, Navy require tenure track positions; DARPA tenure track or equivalent at non-profits

What: Topics must conform with program officer interests / DARPA announces specific topics

How Much:

- Army - not to exceed $120K/yr for three years
- Air Force - $150K/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
- DARPA - up to $250K/yr for up to two years (with possible $500K for third year)

When:

- “Anytime” for Army
- 2 May 2023 for the Air Force FY24 competition (AFOSR BAA 2023-0011)
- 1 Jul 2022 for Naval FY23 competition (ONR N00014-23-S-F007)
- 30 Nov 2022 for the DARPA FY23 competition (DARPA RA-23-01)

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

Listing of prior Army, AF, Navy, DARPA awardee information available from DC Office for FY07-FY24
ONR/AFOSR YIP Selection Process

Financial incentive to PO

AFOSR      full funding by Institutional account
ONR        half funding by institutional account
ARO        no funding by institutional account

PO prioritizes proposals submitted to him/her

That data is submitted up the organization chain of command

Each level winnows:

- to select those with the more promising impact,
- to reflect the organization priorities, and
- to balance awards throughout the organization
Army Early Career Award

Who: This targeted opportunity is open to U.S. citizens, U.S. Nationals, or Lawful Permanent Residents of the U.S. who have held a tenure-track position at a U.S. institution of higher education for fewer than five years at the time of application. Faculty at an institution of higher education which does not designate a faculty appointment as "tenure track" are eligible if that fact is so indicated in the proposal, and the supporting letter from the institute states that the faculty member submitting the proposal will be considered for a permanent appointment.

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 $120K per year for three years

When: Proposals may be submitted at any time.

Where: DEVCOM Army Research Laboratory Broad Agency Announcement for foundational research

<table>
<thead>
<tr>
<th>USC Awardees</th>
<th>Year</th>
<th>Name</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018 Han Wang</td>
<td>EE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012 Fei Sha</td>
<td>CS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009 Michelle Povinelli</td>
<td>EE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Army no longer announcing YIPs publicly
**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 seven years (on or after 1 Apr 2015 for the FY23 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: https://www.afrl.af.mil/AFOSR/

**How Much:** The estimated value of each award is approximately $150K per year for three years.

**When:** proposal due 14 Aug 2023 for FY24 competition

**Where:** Air Force Fiscal Year 2024 YIP  AFRL-AFOSR-BAA-2023-0011 (released May 2023)

<table>
<thead>
<tr>
<th>Year</th>
<th>Awards</th>
<th>Proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2024</td>
<td>48</td>
<td>159</td>
</tr>
<tr>
<td>FY 2023</td>
<td>58</td>
<td>175</td>
</tr>
<tr>
<td>FY 2022</td>
<td>36</td>
<td>175</td>
</tr>
<tr>
<td>FY 2021</td>
<td>36</td>
<td>215</td>
</tr>
<tr>
<td>FY 2020</td>
<td>40</td>
<td>220</td>
</tr>
<tr>
<td>FY 2019</td>
<td>31</td>
<td>290</td>
</tr>
<tr>
<td>FY 2018</td>
<td>45</td>
<td>280</td>
</tr>
<tr>
<td>FY 2017</td>
<td>58</td>
<td>230</td>
</tr>
<tr>
<td>FY 2016</td>
<td>56</td>
<td>265</td>
</tr>
<tr>
<td>FY 2015</td>
<td>57+</td>
<td>200+</td>
</tr>
</tbody>
</table>

**USC Awardees**

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>2024</td>
<td>Andres Gomez Escobar</td>
<td>ISE</td>
</tr>
<tr>
<td>2022</td>
<td>Maisam Razaviyayn</td>
<td>ISE</td>
</tr>
<tr>
<td>2020</td>
<td>Constantine Sideris</td>
<td>EE</td>
</tr>
<tr>
<td>2019</td>
<td>Eli Levenson-Falk</td>
<td>Phy</td>
</tr>
<tr>
<td>2018</td>
<td>Qiming Wang</td>
<td>CEE</td>
</tr>
<tr>
<td>2017</td>
<td>Mahdi Soltanolkotabi</td>
<td>EE</td>
</tr>
<tr>
<td>2016</td>
<td>Mitul Luhar</td>
<td>AME</td>
</tr>
<tr>
<td>2014</td>
<td>Rehan Kapadia</td>
<td>EE</td>
</tr>
<tr>
<td>2013</td>
<td>John Carlsson</td>
<td>ISE</td>
</tr>
<tr>
<td>2012</td>
<td>Jahan Dawlaty</td>
<td>Chem</td>
</tr>
</tbody>
</table>
**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 FY2023 have begun their first appointment on or after 01 Jan 2015

**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.

**How Much:** Proposals may request up to $170K per year for up to 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.

**When:** proposal due 7 Jul 2023 for the FY24 competition (Solicitation released 29 Mar 2023)

**Where:** Fiscal Year 2024 ONR Young Investigator Program, N00014-23-S-F004

<table>
<thead>
<tr>
<th>Year</th>
<th>Awards</th>
<th>Proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY24</td>
<td>29</td>
<td>220</td>
</tr>
<tr>
<td>FY23</td>
<td>25</td>
<td>170</td>
</tr>
<tr>
<td>FY22</td>
<td>32</td>
<td>220</td>
</tr>
<tr>
<td>FY21</td>
<td>37</td>
<td>260</td>
</tr>
<tr>
<td>FY20</td>
<td>26</td>
<td>280</td>
</tr>
<tr>
<td>FY18</td>
<td>31</td>
<td>340</td>
</tr>
<tr>
<td>FY17</td>
<td>33</td>
<td>360</td>
</tr>
<tr>
<td>FY16</td>
<td>47</td>
<td>260</td>
</tr>
<tr>
<td>FY15</td>
<td>36</td>
<td>383</td>
</tr>
</tbody>
</table>

**USC Awardees**

- 2024: Hangbo Zhao, AME
- 2023: Constantine Sideris, ECE
- 2021: Rehan Kapadia, ECE
- 2021: Eli Levenson-Falk, Physics
- 2019: Qiming Wang, CEE
- 2019: Maryam Shanechi, ECE
- 2018: Hao Li, Computer Sci
**Who:** Participation is limited to untenured Assistant or Associate Professors within 3 years of appointment to a tenure-track position at a U.S. institution of higher learning. Or Tenured faculty within 3 years of tenure date. Or an equivalent at a non-profit research institution within 12 years of the receipt of their Ph.D. 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/or 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 those 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. 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 YFA2024@darpa.mil

**How much:** Two years of funding at $250K each year. Of an entire YFA class, a few of the most promising recipients may be selected for a third year supported by $500K each in funding.

**When:** Exec Summaries due 13 Dec 2023; Proposals due 22 Feb 2024 for the FY24 competition (Solicitation released Nov 2023)

**Where:** Research Announcement Young Faculty Award, DARPA-RA-24-01

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Awards</th>
<th>USC Awardees</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY23</td>
<td>30 awards</td>
<td></td>
</tr>
<tr>
<td>FY22</td>
<td>27 awards</td>
<td></td>
</tr>
<tr>
<td>FY21</td>
<td>32 awards</td>
<td></td>
</tr>
<tr>
<td>FY20</td>
<td>30 awards</td>
<td></td>
</tr>
<tr>
<td>FY19</td>
<td>31 awards</td>
<td></td>
</tr>
<tr>
<td>FY18</td>
<td>35 awards</td>
<td></td>
</tr>
</tbody>
</table>

**USC Awardees**

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>Quntao Zhuang</td>
<td>ECE</td>
</tr>
<tr>
<td>2020</td>
<td>Pierluigi Nuzzo</td>
<td>ECE</td>
</tr>
<tr>
<td>2017</td>
<td>Paul Bogdan</td>
<td>EE</td>
</tr>
<tr>
<td>2016</td>
<td>Emilio Ferrara</td>
<td>ISI/CSE</td>
</tr>
<tr>
<td></td>
<td>James Boedicker</td>
<td>PHY</td>
</tr>
</tbody>
</table>
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) 2017 - 2012
- Defense Medical (DMRDP) 2017 - 2016
- Lung Cancer (LCRP) 2016 - 2015
- Peer Reviewed Orthopedic (PRORP) 2010
- Ovarian Cancer (OCRP) 2009, 2008
- Prostate Cancer (PCRP) 2009, 2008
- Neurofibritosis (NFRP) 2002
- Breast Cancer (BCRP) 2001, 2000
Congressionally Directed Research Medical Programs (CDMRP)
New Investigator Award - Early Career

Historical Record for New Investigator Awards - Early Career:
Gulf War Illness (GWIRP) 2016 - 2006

New Investigator Award - Early Career - an example - Gulf War Illness Research Program

Principal Investigator:
Transitioning Postdoctoral Fellow: Senior postdoctoral fellows who have completed at least 3 years of postdoctoral training.
Early-Career Investigator: Independent investigators within 5 years since their last training position.
New GWI Researcher: Established independent investigators who have received less than $300,000 in federally funded, non-mentored GWI research funding.)

New Investigator Award applications must include preliminary data is not required
• Maximum funding for the entire period of performance is $500,000 for direct costs (plus indirect costs)
• Maximum period of performance is 3 years
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. The DSSG is sponsored by DARPA and administered by the Institute for Defense Analysis (IDA).

How Much: covers expenses

When: Nominations for DSSG 2026-2027 will be accepted through Dec 2024.

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

USC Awardees:
2018-19  Michelle Povinelli  EE
2010-11  John Heidemann  ISI
<table>
<thead>
<tr>
<th>Chart #s</th>
<th>Topic</th>
<th>Topic Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - 4</td>
<td>DOE Overview</td>
<td></td>
</tr>
<tr>
<td>5 - 24</td>
<td>Basic Research - Office of Science (SC)</td>
<td>5 - 10 SC Overview</td>
</tr>
<tr>
<td>11 - 12</td>
<td>Advanced Computing for Scientific Research</td>
<td></td>
</tr>
<tr>
<td>13 - 16</td>
<td>Basic Energy Sciences</td>
<td></td>
</tr>
<tr>
<td>17 - 18</td>
<td>Biological and Environmental Research</td>
<td></td>
</tr>
<tr>
<td>19 - 20</td>
<td>Fusion Energy Science</td>
<td></td>
</tr>
<tr>
<td>21 - 22</td>
<td>High Energy Physics</td>
<td></td>
</tr>
<tr>
<td>23 - 24</td>
<td>Nuclear Physics</td>
<td></td>
</tr>
<tr>
<td>25 - 38</td>
<td>Applied Research - Office of Energy</td>
<td></td>
</tr>
<tr>
<td>26 - 28</td>
<td>Electricity</td>
<td></td>
</tr>
<tr>
<td>29 - 33</td>
<td>Energy Efficiency and Renewable Energy</td>
<td></td>
</tr>
<tr>
<td>34 - 36</td>
<td>Fossil</td>
<td></td>
</tr>
<tr>
<td>37 - 38</td>
<td>Nuclear</td>
<td></td>
</tr>
<tr>
<td>39 - 43</td>
<td>ARPA-E</td>
<td></td>
</tr>
<tr>
<td>44 - 46</td>
<td>National Nuclear Security Administration (NNSA)</td>
<td></td>
</tr>
</tbody>
</table>
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. The specific topics are not identical to the DOE generic research announcement.

How Much: The average award size is $875K 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) 30 Jan 2024 for FY2024 competition

Where: DE-FOA-0003176 for most recent announcement for FY2024

FY 2023 93 (60 Univ) USC Awardees
FY 2022 83 (56 Univ) approximately 600 proposals
FY 2021 83 (51 Univ) 2023 Kandis Abdul-Aziz CEE
FY 2020 76 (50 Univ)  
FY 2019 73 (46 Univ)  
FY 2018 84 (54 Univ)
<table>
<thead>
<tr>
<th>Chart #s</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - 3</td>
<td>NASA Overview</td>
</tr>
<tr>
<td>4 - 15</td>
<td>Science Mission Directorate</td>
</tr>
<tr>
<td>7 - 14</td>
<td>Divisions, including ROSES Research Announcement</td>
</tr>
<tr>
<td>15</td>
<td>Salmon Research Announcement</td>
</tr>
<tr>
<td>16 - 20</td>
<td>Aeronautics Research Mission Directorate</td>
</tr>
<tr>
<td>21 - 23</td>
<td>Human Exploration and Operations Systems Mission Directorate</td>
</tr>
<tr>
<td>24 - 27</td>
<td>Space Technology Mission Directorate</td>
</tr>
<tr>
<td>28</td>
<td>Office of the Chief Technologist</td>
</tr>
<tr>
<td>29</td>
<td>NASA Centers</td>
</tr>
</tbody>
</table>
NASA Science Mission Directorate
Earth Sciences Division
Early Career Investigator

**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 six years before the issuance date of the ROSES NRA.

**What:** The Early Career Investigator Program in Earth science is designed to support outstanding scientific research and career development of scientists and engineers at the early stage of their professional careers. The program welcomes innovative research initiatives and seeks to cultivate diverse scientific leadership in Earth system science.

The Earth Science Division (ESD) places particular emphasis on the investigators' ability to promote and increase the use of space-based remote sensing, the integration of space-based remote sensing data with other datasets (e.g., surface, air) and into models, and the delivery of actionable Earth science — making Earth science data more usable and impactful for the benefit of humanity.

**How Much:** Awards range between $80-$90K per year for a period of up to three years.

**When:** Competed in three year cycle - last solicited in ROSES - 2023

**Where:** NRA: Research Opportunities in Space and Earth Sciences (ROSES) - 2024  NNH24ZDA001N Topic A39
NASA Science Mission Directorate
Heliophysics Division
Early Career Investigator Program

Who: Tenure track or non-tenure track position; less than 10 years beyond the receipt of PhD

What: The Heliophysics Division wants to identify early career researchers who have the potential to develop new scientific ideas and effectively pursue and promote them and lead the community in new directions. To achieve that goal, (both Step-1 and Step-2) proposals to this program element include an extra component not described in Table 1 of ROSES or the Guidebook: a statement of the potential of the PI for scientific leadership. Scientific leadership includes both direct research contributions and service to the Heliophysics community.

How Much: average award $125-175K/yr for up to 4 years

When: NOI 18 Sep 2024 Proposal 3 Dec 2024

Where: NRA: Research Opportunities in Space and Earth Sciences (ROSES) - 2024 NNH24ZDA001N Topic B14
Who: The Early Career Fellowship (ECF) program was established 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 Planetary Sciences Division. PhD within 10 calendar years of the proposal submission.

What: The proposal must contain information about the eligible parent ROSES award that is the basis of the ECA proposal.

How Much: one time, $200K

When: 5 Dec 2024

Where: NRA: Research Opportunities in Space and Earth Sciences (ROSES) - 2024 NNH24ZDA001N Topic C18
Who: Outstanding early career researchers, including postdoctoral researchers, nontenured faculty members, term civil servants, and employees who intend to develop careers involving innovation and technology development for space astrophysics. PhD year no more than 8 years before issuance date of ROSES NRA. Be a US citizen or permanent resident.

What: This program consists of two components with two different submission procedures. The first component is the one-page application from an early career individual to be named a Roman Technology Fellow (RTF). The second component is the subsequent submission of a proposal for up to $300K in Fellowship Funds by a previously selected RTF once that individual obtains a permanent or permanent-track position, in order to start a laboratory or develop a research group at the Fellow’s institution.

How Much: up to $300K

When: see ROSES solicitation

Where: NRA: Research Opportunities in Space and Earth Sciences (ROSES) - 2024 NNH24ZDA001N Topic D8
Who: 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. 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. TRL1-2 at beginning of effort. Prior awardees available at https://www.nasa.gov/directorates/spacetech/strg/archives_stro.html

How Much: $200K per year for up to three years

When: The ECF Appendix is expected to be released at least biannually and will feature specific topics.

Where: Solicitation 80HQTR23NOA01-23ECF-B1 (FY2023) All proposals must be submitted electronically through NSPIRES or through Grants.gov (www.grants.gov).
Environmental Protection Agency
Early Career Awards
https://www.epa.gov/research-grants/research-funding-opportunities

Who: PIs with outstanding promise at the Assistant Professor or equivalent level. Principal investigators from applicant institutions applying for the early career portion of the Request for Applications (RFA) must meet the following additional eligibility requirements:
1. Hold a doctoral degree in a field related to the research being solicited by the closing date of the RFA;
2. Be untenured at the closing date of the RFA;
3. By the award date, be employed in a tenure-track position (or tenure-track-equivalent position) as an assistant professor (or equivalent title) at an institution in the U.S., its territories, or possessions.

What: EPA supports leading edge extramural research in exposure, effects, risk assessment, and risk management through competitions for STAR grants and fellowships. Specific topics for early career awards are announced, with recent examples:

- EPA-G2022-STAR-F2 Early Career - Drivers and Environmental Impacts of Energy Transitions in Underserved Communities

How Much: Up to a total of $320K for early career awards, including direct and indirect costs, with a maximum duration of three years.

When: See the specific RFA - this opportunity has not been in recent announcements

Where: https://www.epa.gov/research-grants
What: NIJ is interested in supporting researchers who are early in their careers and new to NIJ’s research grant portfolios, specifically non-tenured assistant professors, or equivalent full-time staff scientist positions in a research institution, who propose research on topics relevant to NIJ’s Office of Research and Evaluation (ORE) and/or Office of Science and Technology (OST). To that end, NIJ may, in appropriate circumstances, give special consideration in award decisions to applications proposing such researchers as principal investigators (PIs).

To qualify, the proposed PI must at the time of application submission:

- Hold a non-tenured assistant professor appointment at an accredited institution of higher education in the United States or an equivalent full-time staff scientist position at a research institution; and
- Have completed a terminal degree or post-graduate clinical training within the ten (10) years prior to the solicitation, and
- Have never previously received NIJ funding as a PI on a research project with the exception of Graduate Research Fellows or Data Resources Program grantees.
Office of Research Strategy and Development

Assets Available for Assistance
# Guides to FY2024 Federal Agency Research Funding

Ask for those Guides you think will be pertinent to your research interests

<table>
<thead>
<tr>
<th>Agency</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOD</td>
<td>Defense</td>
</tr>
<tr>
<td>DOE</td>
<td>Energy</td>
</tr>
<tr>
<td>DOJ</td>
<td>Justice</td>
</tr>
<tr>
<td>DOT</td>
<td>Transportation</td>
</tr>
<tr>
<td>DHS</td>
<td>Security</td>
</tr>
<tr>
<td>ED</td>
<td>Education</td>
</tr>
<tr>
<td>EPA</td>
<td>Environment</td>
</tr>
<tr>
<td>HHS</td>
<td>Health</td>
</tr>
<tr>
<td>NASA</td>
<td>Space</td>
</tr>
<tr>
<td>NIST</td>
<td>Standards</td>
</tr>
<tr>
<td>NOAA</td>
<td>Ocean/Atmos</td>
</tr>
<tr>
<td>USDA</td>
<td>Agriculture</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air Force, Army, Army Res. Inst., Navy, DARPA, CBDP, USACE, NPS, USAFA, USMA, CDMRP</td>
</tr>
<tr>
<td></td>
<td>Office of Science, EERE, FECD, NE, OE, NNSA, ARPA-E</td>
</tr>
<tr>
<td></td>
<td>NIJ, BJA, BJS, OJJDP, OVC, NIC</td>
</tr>
<tr>
<td></td>
<td>OST-R, FHWA, FAA, NHTSA, FTA, FRA</td>
</tr>
<tr>
<td></td>
<td>Science and Technology Directorate</td>
</tr>
<tr>
<td></td>
<td>IES, OSERS, OESE, OPE</td>
</tr>
<tr>
<td></td>
<td>ORD</td>
</tr>
<tr>
<td></td>
<td>ACL, ACR, CDC, AHRQ, FDA, HRSA, CMS, BARDA, ARPA-H</td>
</tr>
<tr>
<td></td>
<td>SMD, ARMD, SOMD, ESDMD, STMD</td>
</tr>
<tr>
<td></td>
<td>NIFA, ARS, FS</td>
</tr>
</tbody>
</table>
Timely Access to new Opportunities

DC Office of Research Strategy and Development

E-mail Alerts
Grants.gov
SAM.gov
Environmental Protection Agency (EPA)
NASA’s Office of Space Science Research Announcements
NIH Guide to Grants and Contracts
National Science Foundation (NSF)
National Institute for Standards and Technology (NIST)
ED Institute for Educational Sciences
National Institute of Justice (NIJ)

Grant Forward
Grant Forward, by Cazoodle, is a database of grants where users can search for funding opportunities (federal-, state-, foundation- and institution-sponsored research) across all fields, including the sciences, humanities, and arts. Free (i.e., prepaid) to all USC employees. Creating an account is a simple two-step process – just follow the instructions on the New User Quick Guide

Funding Opportunity Search
• Search for funding opportunities spread across 39 subject areas and 2009 categories
• Large Database of Sponsors comprising Foundation, Federal and Institutions
• Set up alerts and get opportunities delivered straight to your inbox

Researcher Profiles
• Infers researcher’s interests from publication pages and other sources to identify funding opportunities that match
• Each funding opportunity is matched to researchers based on research interests and career stage
Agency Sites Providing Information on Previously Funded Awards

CDC  http://wwwn.cdc.gov/fundingprofiles/fundingprofilesria/
DOD  https://dodgrantawards.dtic.mil/grants/
DOE SC https://pamspublic.science.energy.gov/WebPAMSExternal/interface/awards/AwardSearchExternal.aspx
EPA  http://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/recipients.welcome/displayOption/grants
NIH  http://report.nih.gov/
NIJ  http://nij.gov/funding/awards/Pages/welcome.aspx
NIST  the various program websites generally have a list of prior awardees for that program
NSF  http://www.nsf.gov/awardsearch/
NEA  http://arts.gov/grants/recent-grants
NEH  the various program websites have a list of prior awardees for that program
NRC  http://www.nrc.gov/about-nrc/grants/awards/index.html

Website Providing Searchable Information on Federal Grants/Contracts

http://usaspending.gov/

(but does not identify the funding agency program officer or the institutional awardee PI)
Resources for Proposal Writing
(available from Res Adv or at shown URL)

NSF CAREER
- CAREER Proposal Writing: Hazelrigg, NSF
- CAREER Proposal Writing Tips: Pei
- Writing a Successful CAREER Proposal: Vigeant, Univ Hartford

Other
- USC Research Advancement: https://research.usc.edu/training/
  - A Tips for Authoring Grant Proposals: Hill, Univ Wisc-Madison
  - Tips on Writing a Competitive Grant Proposal: Clary, Western SARE
  - Writing a good grant Proposal: Jones, Microsoft
  - Guide for Writing a Funding Proposal: Levine, Mich State Univ.
  - Obtaining Federal Funding: Wardle, NSF
  - NSF Guide for Proposal Writing: NSF 04-016
  - The R&D Proposal: Yoder, Office of Naval Research
  - Demystifying DoD Research Funding: Palmer, Army Research Office
  - NASA Writing Research Proposals: Hertz, NASA Headquarters
  - NIH Writing your application: http://grants.nih.gov/grants/writing_application.htm
  - EPA Writing a Competitive Proposal: https://www.epa.gov/ports-initiative/tips-successful-grant-application

USC Center for Excellence in Research Workshops
- Developing Funded Research Proposals: Randy Hall
- Writing Compelling NSF Proposals: Paul Ronney
- Developing NIH Grant Applications: Steve Moldin
- Obtaining DOD Medical Research Funding: Carl Castro
- Writing Persuasive Proposals: Bonnie Lund
Postdoctoral Fellowships
Selected Opportunities - some continuing, others ephemeral

Science.gov
Grant Forward

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

Intel Community
- Postdoctoral Fellows Res Program
  - http://www.icpostdoc.org/

NASA
- http://nasa.orau.org/postdoc/
- New (Early Career) Investigator Program in Earth Science - ROSES 2015 A-35
- Fellowships for Early Career Researchers - ROSES 2015 C-16
- Nancy Grace Roman Technology Fellowships in Astrophysics for Early Career Researchers - ROSES 2015 D-9
- National Space Biomedical Research Institute Fellowships - http://www.nsbri.org/firstaward/

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)
- Documenting Endangered Species
- GeoPrisms Program
- International Research Fellowship Program
- Law and Social Sciences
- Mathematical Sciences Postdoctoral Research Fellowships
- NSF Astronomy and Astrophysics Postdoctoral Fellowships
- NSF Earth Sciences Postdoctoral Fellowships
- NSF Fellowships for Transformative Computational Science using CyberInfrastructure
- Pan-American Advanced Studies Institutes Program
- Postdoctoral Research Fellowships in Biology
- SBE Postdoctoral Research Fellowships
- ASEE/NSF Corporate Postdoctoral Fellowship for Engineers

USDA NIFA
- AFRI Education and Literacy Initiative
Research Funding
Research initiative alerts
Collaborations across schools, other institutions
Federal funding agency advocacy / connections / intel
Surrogate representation at DC area events
Strategically targeted activities
Proposal preparation - biosketch, letters of support, editorial, budget, and scientific
Mission Agency Program Summary (MAPS) resources
Program/Program Officer database
Observations/Suggestions on proposal drafts

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

---

Proposal: Budget/Presentation

<table>
<thead>
<tr>
<th>Robyn Gill - manager</th>
<th><a href="mailto:robyngil@usc.edu">robyngil@usc.edu</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashley Gordon - specialist</td>
<td><a href="mailto:ashleygo@usc.edu">ashleygo@usc.edu</a></td>
</tr>
<tr>
<td>Aaron Nordman - writer</td>
<td><a href="mailto:anordman@usc.edu">anordman@usc.edu</a></td>
</tr>
<tr>
<td>Ethan Bochicchio - writer</td>
<td><a href="mailto:ebochicc@usc.edu">ebochicc@usc.edu</a></td>
</tr>
<tr>
<td>Jordan Locy - Senior writer</td>
<td><a href="mailto:locy@usc.edu">locy@usc.edu</a></td>
</tr>
</tbody>
</table>

Technical

<table>
<thead>
<tr>
<th>Steve Moldin - biology, medical, bit of everything</th>
<th><a href="mailto:moldin@usc.edu">moldin@usc.edu</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jim Murday - physical sciences/engineering</td>
<td><a href="mailto:munday@usc.edu">munday@usc.edu</a></td>
</tr>
<tr>
<td>Al Olson - cyber and intelligence</td>
<td><a href="mailto:aolson@usc.edu">aolson@usc.edu</a></td>
</tr>
</tbody>
</table>