Obtaining Federal Funding

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Something about me

- Member of the College of Engineering faculty at Georgia Tech since 1991
- Have secured research funding to support over 40 graduate students over the years (currently ~60k per student per year plus research supplies and equipment)
- Originally from Lima, Peru but obtained majority of college education in the US
- Joined the VPID office about a year ago on a part time basis to assist with developing funding strategies
- So far have received $360k and counting
How to locate federal funding?

- There are many federal agencies that can be tapped to help you fund your diversity initiatives.
- Most important agencies are:
  - National Science Foundation (NSF)
  - National Institute of Health (NIH)
  - Department of Energy (DOE)
  - Department of Education (DoEd)
  - Department of Defense (DoD)
  - NASA, ONR, AFOSR, ARO, AAAS, etc..
The biggest players

- The National Science Foundation

- The National Institute of Health
  - http://www.nih.gov/
NSF has the most comprehensive set of programs at all levels:

- K-12 outreach
- Undergraduate Education
- Graduate Education
- Faculty issues

First thing to do is to become familiar with their website located at www.nsf.gov
Secondly, I suggest browsing through the Office of the Director page and click on the broadening participation portfolio to see the summary of all currently available programs.

Note that new programs are being added all the time so it pays to check it out regularly.

The list of all current programs can be found at http://www.nsf.gov/od/broadeningparticipation/bp_portfolio_dynamic.jsp
As you can see, there are many programs!!! Not all universities or colleges are eligible to apply to all programs. Some programs are reserved for minority institutions while others require formation of partnerships. Deadlines are firm and all required documents that must be included in the grant application. Preparation of the first application must be started months in advance.
How to develop a proposal for NSF

- Identify program you are interested in applying for
- Get a copy of the RFP and underline everything that you will need information for
- Follow instructions to the letter
- C.V.s of P.I. and other senior personnel must not exceed 2 pages each and follow format
- Be aware of what budget costs you are allowed to include and what the maximum total budget is
- Provide all items requested
What needs to be included in proposal?

- One page summary must include brief description of project highlighting the intellectual merit and the broader impacts.
- Introduction must include some recent references to demographics data, studies demonstrating why there is a need to broaden participation of a particular demographic, etc..
- Description of activities must address main goal of the proposed project.
What needs to be included in proposal to NSF?

- All broadening participation focused projects must address what value will be gained by the proposed project.

Figure 1.1 in Reports on Evaluating impact of Broadening Participation (NSF Report by Clewell and Fortenberry 2009)
Types of Programs

- Free standing broadening participation programs to help train K-12 students and their teachers
- Undergraduate scholarships for students in STEM fields
- Graduate fellowships for students in STEM fields
- Post-doctoral programs
- Research initiation awards to young faculty
- Supplements to currently funded PIs already conducting research
- Major research centers and interdisciplinary programs
- Domestic and international initiatives
National Institute of Health (NIH)

- Many programs that are similar to those at NSF
  - Undergraduate and graduate scholarships
  - Post doctoral fellowships
  - Early career initiation awards
  - Other career development awards

- Many other different programs for a specific area of research of interest to NIH

- NIH has slightly different funding mechanisms and uses additional acronyms. Go to
  - [http://grants.nih.gov/grants/glossary.htm](http://grants.nih.gov/grants/glossary.htm)
Main current program is via internships at the various DOE labs for:
- Undergraduate and Graduate Students
- Post-doctoral fellows
- Faculty Summer experiences

DOE labs include:
- Ames Laboratory, Argonne National Laboratory
- Brookhaven National Laboratory, Fermi National Accelerator Laboratory
- Idaho National Laboratory, Lawrence Berkeley National Laboratory
- Lawrence Livermore National Laboratory, Los Alamos National Laboratory
- National Energy Technology Laboratory, National Renewable Energy Laboratory
- Oak Ridge National Laboratory, Pacific Northwest National Laboratory
- Princeton Plasma Physics Laboratory, Sandia National Laboratories
- Savannah River National Laboratory, SLAC National Accelerator Laboratory
- Thomas Jefferson National Accelerator Facility
Has many different programs for different education levels
- Pre-school
- Elementary school
- Middle school
- High school
- Post-secondary schools

Has many different programs dedicated to different portions of the population to encourage retention and degree completion
- [http://www2.ed.gov/about/offices/list/ope/trio/index.html#programs](http://www2.ed.gov/about/offices/list/ope/trio/index.html#programs)
NASA Has wide variety of programs for:
- undergraduate and graduate students
- Post doctoral researchers
- Junior and senior faculty

Fellowship programs
- USRP, GSRP

Research Opportunities in Space and Earth Sciences (ROSES)
American Society for the Advancement of Science

- Wide range of programs geared to educate
  - the public, young students
  - teachers and
  - researchers on all STEM fields

- Programs include
  - School age children
  - Activities for high schoolers
  - Undergraduate research opportunities
  - Job fair for graduates and post docs
  - Minority faculty initiation grants
  - Domestic and international programs

- Listing of current programs can be found at
  - http://www.aaas.org/programs/education/#current
US Department of Defense

- Many similar programs to other agencies.
  - Fellowships and scholarships for
  - Undegraduate and graduate students
  - Post doctoral fellowships
  - Faculty Initiation Awards

- Main contracting agency is called DARPA

- One can also get grants via the different branches of the military
  - ONR (Office of Naval Research)
  - AFOSR (Air Force Office of Scientific Research)
  - ARO (Army Research Office)
Has different departments

Main ones are
- NIST (National Institute for Standards and Technology)
- NTIA (National Telecommunications and Information Administration)
- NOAA (National Oceanic and Atmospheric Administration)

Also have internships for
- High school students
- Undergraduate and graduate students
- Post doctoral researchers
- Junior and Senior faculty
Other important websites

- **www.science.gov**
  - Repository of about 55 databases, 2100 programs and 13 federal funding agencies

- **www.grants.gov**
  - Most federal agencies post their deadlines and required forms here
How does one submit proposals?

- Each university or college has an office of Sponsored Programs
- Most places have specialized contracting officers who are familiar with the requirements for each funding agency
- Unlike foundations and corporations, one must submit the proposals using such an office
- Individual administrators or faculty cannot submit proposals directly to the federal agencies
How can a diversity officer engage others?

- There must be buy-in from the top administration
- All researchers are currently required to address broadening participation
- Most STEM faculty are accustomed to navigating the vast funding waters
- Diversity does not only include underrepresented minorities
- Diversity also includes
  - Women
  - Disabled
  - LGBTQ
  - Non-traditional students (i.e. refugees, veterans, etc..)
How does one identify probable candidates?

- Start with URM faculty who are already well established, have tenure and have previously obtained federal grants for a number of years
- Some majority faculty are also willing and able to assist
- Need to conduct a climate study
- It will work better if someone is hired, at least on a part time basis to help the diversity office to tap the funding sources
- Diversity offices must train their staff to become self sufficient at least to maintain their main programs to ensure student success (i.e., student services programs)
What programs should not be handled by diversity officers?

- Any research-based funding programs such as scholarships for undergraduate, graduate students and post-doctoral researchers are best left to faculty who are in the know about the requirements, challenges and nuances of specific research topics.

- Any research-based internships that are internal or external to the institution for the same reasons as above.
What should the diversity office provide?

- Provide main analysis of the demographics of interest for use by all stakeholders
- Have more than one staff member be well versed on how to process raw data and not rely entirely on the institution’s established data collecting format
- Establish a regular schedule for updating the graphs and the numbers
- Require contribution to staff time when different requests come in that are outside of the regularly established patterns
Summary

- This is an excellent time to focus on increasing diversity at all levels.
- The many funding opportunities currently available must be taken advantage of while they are available.
- Above all, aim to be as fair and equitable as it is feasible.
- Do not take assistance provided by others for granted.
- Aim to quickly recognize the efforts made by others however small they may be.
- Remember that one can conquer mountains one small step at a time.
Questions and Comments