



How to Address the Broader Impact in Your NSF Fellowship Application Some NSF-Supported Initiatives at UW-Madison to Leverage in Your Proposal

CIRTL - Center of the Integration of Research, Teaching and Learning Network

CIRTL, a national network of 21 institutions, promotes the development of a national faculty in science, technology, engineering, and mathematics (STEM) committed to implementing and advancing effective teaching practices for diverse student audiences as part of their professional careers. To accomplish these goals CIRTL is founded on three pillars: Teaching-as-Research, Learning Communities and Learning-through-Diversity. The local implementation of CIRTL at UW-Madison is The Delta Program in Research, Teaching, and Learning.

For more information visit: www.cirtl.net and www.delta.wisc.edu

WiscAmp – Wisconsin Alliance for Minority Participation

WiscAMP aims to address retention and persistence of underrepresented minorities in STEM disciplines by expanding and improving on successful models already in place and fostering and sustaining an alliance among partner institutions.

For more information visit: www.wiscamp.engr.wisc.edu/

WISELI – Women in Science, Engineering and Leadership Institute

The long-term goal of WISELI is to have the gender of the faculty, chairs, and deans reflect the gender of the student body. To accomplish these goals, WISELI will be a visible, campus-wide entity, endorsed by top-level administrators, which will use UW-Madison as a "living laboratory" to study the problem and implement solutions.

For more information visit: www.wiseli.engr.wisc.edu

IEG UW MRSEC – Materials Research Science and Engineering Center Interdisciplinary Education Group

This program uses examples of nanotechnology and advanced materials to explore fundamental science and engineering concepts at the college level and to share the "wow" and potential of these fields with public audiences. They work to enhance public understanding of science and engineering through a central theme of "Exploring the Nanoworld, Innovating through Materials" using web dissemination to a range of educators, presentations in public venues, and contributions to popular publications and media.

For more information visit: <http://mrsec.wisc.edu/Edetc/>

NSEC- Nanoscale Science and Engineering Center

This group addresses grand challenges associated with directed assembly of nanoscale materials into functional systems and architectures through the use of self-assembly, chemical patterning, and external fields. Public dialogue, analysis of governmental regulation, and environmental health and safety research are integral components of the Center. The NSEC operates an ambitious and unique education and outreach program aimed at cultivating the next generation of nanoscale science and engineering experts with diverse and interdisciplinary backgrounds.

For more information visit: <http://www.nsec.wisc.edu>

CHANGE-IGERT -Certificate on Humans and the Global Environment

The Certificate on Humans and the Global Environment (CHANGE) established a workgroup that aids a small amount of new PhD students each year. The CHANGE program involves faculty members in departments ranging across atmospheric and oceanic sciences, ecology, environmental studies, veterinary medicine, and sociology. An objective of the CHANGE program is to train graduate students to work on environmental problems as a group. Students are encouraged to expand their collaborative efforts beyond the classroom through client-based project work and academic publications.

For more information visit: <http://www.nelson.wisc.edu/graduate/change/index.php>

(IGERT) - NSF Integrative Graduate Education and Research Traineeship Program

The IGERT Program is intended to establish innovative new models for graduate education and training for scientists and engineers in a fertile environment for collaborative research that transcends traditional disciplinary boundaries. It is also intended to facilitate diversity in student participation and preparation, and to contribute to a world-class, broadly inclusive, and globally engaged science and engineering workforce.

For more information visit: http://nsf.gov/funding/pgm_summ.jsp?pims_id=504772

Talking About Leaving, Revisited

This five-year study builds on research by Elaine Seymour and Nancy Hewitt that found poor teaching was the most significant influence on STEM majors' decisions to switch fields. Seymour and Hewitt's 1997 book *Talking about Leaving: Why Undergraduates Leave the Sciences* subsequently spurred nationwide efforts to improve teaching in STEM courses and to retain more students of color and women into STEM fields. This new study, known as *Talking about Leaving Revisited*, will investigate whether rates of switching from STEM majors—and students' experiences in the process—have changed since efforts to improve college science teaching began 15 years ago.

For more information visit: <http://talr.wceruw.org/>

PREP – Psychological Research Experience Program

The Psychology Research Experience Program (PREP) provides intensive mentoring and experience in scientific research and professional development to undergraduates from historically underrepresented populations who have expressed and demonstrated an interest in a career in scientific psychology.

For more information visit:

<http://psych.wisc.edu/Psychological Research Experience Program.htm>

Water Sustainability and Climate In the Yahara Watershed

The project is part of an endeavor to understand the interactions between water, climate, land use, infrastructure, and ecosystems through place-based research and innovative methods.

For more information visit: <https://wsc.limnology.wisc.edu/about/project>

IceCube Neutrino Observatory

IceCube is a particle detector at the South Pole that records the interactions of a nearly massless subatomic particle called the neutrino. IceCube searches for neutrinos from the most violent astrophysical sources: events like exploding stars, gamma-ray bursts, and cataclysmic phenomena involving black holes and neutron stars. The IceCube telescope is a powerful tool to search for dark matter and could reveal the physical processes associated with the enigmatic origin of the highest energy particles in nature. The University of Wisconsin–Madison is the lead institution responsible for the maintenance and operations of the detector.

For more information visit: <https://icecube.wisc.edu/>

CHTC – The Center for High Throughput Computing

The Center for High Throughput Computing (CHTC) offers a variety of large-scale computing resources and services for UW-affiliated researchers and their collaborators, including classically-defined high-throughput computing (HTC) and high-performance computing (HPC) resources.

For more information visit: <http://chtc.cs.wisc.edu>

Includes: The Campus Cyberinfrastructure – Network Infrastructure and Engineering (CC-NIE) award from the National Science Foundation (NSF). New networking and storage capabilities will provide the campus with capabilities that support high-volume bulk data transfer, remote experiment control and data visualization. - See more at: <http://www.doit.wisc.edu/news/grant-will-boost-uw-madison-computing-network-to-handle-surge-of-research-data/#sthash.CAhE5DpO.dpuf>