From: All NDSU Employee list
To: NDSU-EMPLOYEE-OFFICIAL@LISTSERV.NODAK.EDU
Subject: RCA Update - June 18, 2018 Edition
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Attachments: image002.png

Welcome to the Research and Creative Activity Update!
The Office of Research and Creative Activity (RCA) sends weekly emails to NDSU faculty and staff to provide current information on various topics including funding opportunities, grant program changes, research resources, deadlines, notices, and training.

These weekly email updates are archived on the **RCA Website**.

SEARCH FOR NDSU SCHOLARS

FUNDING OPPORTUNITIES

- **NSF: Science of Learning**
- **NSF: STEM + Computing K-12 Education**
- **NSF: Educating the Future STEM Workforce**
- **NSF: Advancing Informal STEM Learning**
- **NSF: Major Research Instrumentation (MRI)**
- **USDA and NIH: Comparative Genomics Research**
- **NSF: STEM Education for the Future**

NEWS & NOTICES

- **NSF-ENG: Removal of Deadlines for Core Programs**
- **Wait…It's Not MY Grant?**

EVENTS

- **Working at the University-Industry Webinar Series**

NSF: Science of Learning (SL)

The National Science Foundation (NSF) **Science of Learning program** supports potentially transformative basic research to advance the science of learning. The goals of the SL Program are to develop basic theoretical insights and fundamental knowledge about learning principles, processes and constraints. Projects that are integrative and/or interdisciplinary may be especially valuable in moving basic understanding of learning forward but research with a single discipline or methodology is also appropriate if it addresses basic scientific questions in learning. The Science of Learning Program also accepts proposals for Workshops, EArly-concept Grants for Exploratory Research (EAGER), Rapid Response Grants (RAPID), and Supplements to existing awards. PIs must contact the NSF program officer prior to submission of an EAGER or RAPID proposal. See program **FAQs** for more information.
Full Proposal Deadline Date: July 11, 2018

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NSF: STEM + Computing K-12 Education (STEM+C)

An innovative science, technology, engineering, mathematics and computing (**STEM+C**) workforce and well-educated citizenry are crucial to the Nation's prosperity, security and competitiveness. Preparation for the future workforce must begin in the earliest grades from preK-12, where students need to learn not only the science and mathematics central to these areas, but also how computational thinking is integral to STEM disciplines. Because of the powerful innovation and application of computing in STEM disciplines, there is an urgent need for real-world, interdisciplinary, and computational preparation of students from the early grades through high school (preK-12) that will provide a strong foundation for mid-level technical careers and for continuing education in higher education. This is particularly important in the key science areas described in the National Science Foundation's **Big Ideas for Future NSF Investment**. The STEM+C program supports research and development proposals related to new approaches to pre-K-12 STEM teaching and learning related to Harnessing the Data Revolution, Convergence Research and the Future of Work at the Human-Technology Frontier.

Proposals received by July 2, 2018 will be considered for possible funding in FY18. Proposals received after that date will be reviewed on a rolling basis.

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NSF: Educating the Future STEM Workforce

NSF Accelerating Discovery: Educating the Future STEM Workforce program: A well-prepared, innovative science, technology, engineering, and mathematics (STEM) workforce is crucial to the Nation's prosperity and security. Future generations of STEM professionals are a key sector of this workforce, especially in the critical scientific areas described in the **Big Ideas for Future NSF Investments**. To accelerate progress in these areas, the next generation of STEM professionals will need to master new knowledge and skills, collaborate across disciplines, and shape the future of the human-technology interface in the workplace. As a result, NSF recognizes the need to support development of and research on effective educational approaches that can position the future STEM workforce to make bold advances in these Big Ideas. In response to this need, the NSF's Education and Human Resources Directorate seeks to invest in projects that can educate the STEM workforce to advance discovery in the six research Big Ideas:

(1) Harnessing the Data Revolution;
(2) The Future of Work;
(3) Navigating the New Arctic;
(4) Multi-messenger Astrophysics;
(5) The Quantum Leap; and
(6) Understanding the Rules of Life.

In addition to developing and implementing novel educational and/or training programs, these projects should simultaneously generate new knowledge about effective STEM education, by studying such programs and exploring related issues. Specifically, NSF accepts proposals to support education research and development projects focused on re- or up-skilling the existing workforce; developing the skilled technical workforce; and/or preparing those at the undergraduate, graduate, or postdoctoral fellow/early career levels.

Application deadline: Proposals are accepted April 2, 2018 - January 16, 2019; proposals received by the target date of July 2, 2018, will be considered for FY 2018 funding.

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NSF: Advancing Informal STEM Learning – Limited Submission Program

Limited submission grant programs are those that indicate a limit on the number of proposals that may be submitted by an institution for a particular deadline. A selection process becomes necessary if more applicants express interest in applying than NDSU is allowed to submit to the grant program.

Advancing Informal STEM Learning (AISL) : Notify RCA by 8/1/2018 at 4:00 p.m. if you intend to apply.

The **Advancing Informal STEM Learning (AISL)** program seeks to advance new approaches to and evidence-based understanding of the design and development of STEM learning opportunities for the public in informal environments; provide multiple pathways for broadening access to and engagement in STEM learning experiences; advance innovative research on and assessment of STEM learning in informal environments; and engage the public of all ages in learning STEM in informal environments. The AISL program supports six types of projects:

(1) Pilots and Feasibility Studies,
(2) Research in Service to Practice,
(4) Broad Implementation,
(5) Literature Reviews, Syntheses, or Meta-Analyses, and

(3) Innovations in Development,

(6) Conferences

Application deadline: November 7, 2018.

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NSF: Major Research Instrumentation (MRI) – Limited Submission Program

Limited submission grant programs are those that indicate a limit on the number of proposals that may be submitted by an institution for a particular deadline. A selection process becomes necessary if more applicants express interest in applying than NDSU is allowed to submit to the grant program.

NSF MRI : Notify RCA by 9/5/2018 at 5:00 p.m. if you intend to apply.

The **Major Research Instrumentation (MRI)** Program serves to increase access to multi-user scientific and engineering instrumentation for research and research training in our Nation's institutions of higher education and not-for-profit scientific/engineering research organizations. An MRI award supports the acquisition or development of a multi-user research instrument that is, in general, too costly and/or not appropriate for support through other NSF programs. An MRI proposal may request support for either the acquisition or development of a research instrument.

- Track 1: Track 1 MRI proposals are those that request funds from NSF greater than or equal to $100,000 and less than $1,000,000. Two proposal submissions are allowed per organization.
- Track 2: Track 2 MRI proposals are those that request funds from NSF greater than or equal to $1,000,000 up to and including $4,000,000. One proposal submission is allowed per organization.

Application window: January 1-22, 2019.

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USDA and NIH: Comparative Genomics Research

The U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA) along with the National Institutes of Health (NIH) are participating in **PAR-17-482** "**Comparative Genomics Research Program.**" Applications are invited for research developing comparative approaches that can be used to understand genome structure and function and the relationship between genomic features and phenotypes. NIFA will support studies that enable the use of a diverse array of species to advance our ability to improve genome annotations that complements Functional Annotation of Animal Genomes (FANNG) efforts or understand basic biological processes related to health and disease of agriculturally important animals, as well as studies that develop novel analytical tools and resources for the comparative genomics research community.

Letter of Intent due 30 days before full application submission.

Full applications due October 5, 2018; February 5, 2019; and June 5, 2019.

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NSF: STEM Education for the Future

The National Science Foundation (NSF) has issued a Dear Colleague Letter (DCL): **STEM Education for the Future** which seeks proposals related to harnessing the data revolution and work at the human-technology frontier. This DCL encourages education research and development proposals that are original, creative, and transformative, and that can help the nation education the STEM workforce of the future, in contexts of:

- **Work at the Human-Technology Frontier: Shaping the Future [FW-HTF]**
- **Harnessing the Data Revolution for 21st Century Science and Engineering [HDR]**

This DCL will support three categories of proposals:

(1) Proposals focused on educational transformation: These proposals will leverage technology, computation and/or big data to develop, implement, and analyze educational interventions designed to prepare a diverse workforce, researchers, and innovators of the future. Proposals that explore how students learn to integrate knowledge across disciplines to solve complex problems fall into this category.

(2) Proposals focused on the science of teaching and learning: These proposals will leverage technology,

computation and/or big data to develop, implement, and analyze new tools for assessing and evaluating convergent education strategies that aim to promote student learning at all levels

(3) Planning grants, Research Coordination Networks, Conference, and Workshop Proposals: These proposals will create communities of STEM educators to address convergent curriculum and pedagogical challenges across disciplinary boundaries brought about by the human-technology frontier, the data revolution, or both.

This DCL emphasizes proposals that cross departmental and disciplinary boundaries. To determine whether a research topic is within the scope of this DCL, principal investigators are strongly encouraged to contact the director(s) of the participating program(s) to which they plan to submit their proposal. For more information, view the **DCL**.

Proposals responding to this DCL will be considered until March 1, 2019.

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NSF-ENG: Removal of Deadlines for Core Programs

Effective **August 15, 2018**, unsolicited proposals to core programs in the National Science Foundation (NSF) Directorate for Engineering (ENG) can be submitted at any time. The Directorate for Engineering (ENG) announced this change in a **Dear Colleague Letter (NSF 18-082)** and provided answers to **Frequently Asked Questions (NSF 18-083)**. Other relevant information will be provided on the webpages for the Divisions of Chemical, Bioengineering, Environmental and Transport Systems (**CBET**), Civil, Mechanical and Manufacturing Innovation (**CMMI**), Electrical, Communications and Cyber Systems (**ECCS**), and Engineering Education and Centers (**EEC**).

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Wait…It's Not MY Grant?

Dr. Michael Lauer, NIH's Deputy Director for Extramural Research, recently wrote an article on the various roles and responsibilities of NIH award recipients. "As a PI, it may be okay to refer to "my grant" when chatting with colleagues over coffee, but it is technically incorrect. We hear this confusion a lot, so it's worthwhile to remind researchers about some of the respective roles of institutions and investigators working on a grant award." **Continue reading >>>**

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Working at the University-Industry Interface Webinar Series

If you have missed any of the **Working at the University-Industry Interface Webinar Series,** the last two webinars and presentation materials are available online.

Title: **Managing Intellectual Property (IP) Issues**
Video Link**: https://budurl.me/cg23t**
Presentation Materials Link: **https://www.academicimpressions.com/online_training/0218-uidp6.pdf**
Last date to watch webinar: *June 24, 2018*

Title: **Benefiting from U-I Collaborations with Government Engagement**
Video Link**: https://budurl.me/tyswl**
Presentation Materials Link: **https://www.academicimpressions.com/online_training/0218-uidp7.pdf**
Last date to watch webinar: *July 1, 2018*

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