NDSU | COLLEGE OF ENGINEERING

COLLEGE HAPPENINGS

September 20, 2022

IN THE NEWS

NDSU named lead institution for $14 million NSF I-Corps Hub

Big Iron Farm Show demonstration will show the potential of artificial intelligence and robotics in ag

North Dakota educators, researchers work to better detect diabetes in early stages

CONGRATULATIONS

Please let *College Happenings* know about honors, awards, new grants and other announcements so we can share them with other faculty and staff.

UPCOMING EVENTS

Friday, September 23, **Seminar with former NSF program director Dr. Chenzhong Li**. Dr. Li will discuss his experience as an NSF program director, including information on interdisciplinary opportunities and advice for positioning proposals for NSF funding. Learn more and register.

Monday, September 26 – Saturday, October 1, **NDSU Homecoming**. See the full schedule of events.

Saturday, October 8, **5th Annual North Dakota Biomedical Engineering Symposium**. The event promotes the joint Biomedical Engineering graduate programs and strengthen the collaborations among UND/NDSU faculty and industries. 8:00 a.m. – 5:00 p.m. at the UND Center for Innovation. Register here.

Thursday, October 13, **College of Engineering Scholarship and Awards Reception**. 3:00 p.m.in the NDSU Memorial Union. There is no charge to attend, but please RSVP here by October 6.

Wednesday, October 26, **Academic Leaders Series: Working with Distressed Students**. This workshop will identify some of the common concerns our students face and the key resources that are in place to provide assistance, support, and advocacy. 3:00 – 4:00 p.m. on Zoom.

HELP OUT WITH HOMECOMING

Homecoming is a time for the entire NDSU community to celebrate our contributions as a top research university while we enjoy successful athletics in a great community.

We need staff, faculty and community member volunteers to help events run smoothly. **The Homecoming committee is seeking assistance September 26 – October 1.**

[Select your volunteer shift(s) here](#) and visit the [volunteer website here](#) for more information.

INSTRUCTIONAL ROUNDS PROGRAM

The Office of Teaching and Learning is bringing a new Instructional Rounds program to NDSU. The Instructional Rounds program has been adapted to education from the field of medicine. This program is designed to showcase the excellent teaching that is happening at NDSU and open these classrooms to those who want to learn from each instructor.

If you are interested in showcasing a successful teaching strategy or method you currently use, consider opening your class as a host class. A host class can be of any size. **As an observed instructor you get to choose** when we come to your class and how many individuals your class can successfully host. Your instructional methods do not need to be perfect to be a host class you just need to be able to show that the method or strategy works in your classroom environment. Participants attending instructional rounds are interested in learning from you and how they can apply it to their classroom.

As a host instructor you will also participate in a post class discussion session, so participants have a chance to ask questions and draw out further information about how you plan for and set up your class sessions. If you are interested in showcasing your teaching strategies and methods, contact **Dr. Stacy Duffield**, OTL director, at (701) 231-7102.

Learn More >>

NOMINATIONS OPEN FOR 2022-23 AWARDS

Nominations are invited for faculty awards processed through Faculty Affairs/Office of the Provost.

Nominations may be submitted by faculty, staff, students, alumni, and administrators. *Self-nominations will be accepted to ensure that there are multiple and inclusive pathways to nomination.* Nomination materials should be sent by email to canan.bilengreen@ndsu.edu. Nominations must include a nomination letter (no more than two pages) or nomination form, accompanied by a curriculum vitae (no more than three pages), and should clearly describe how the nominee meets the award criteria. For descriptions of each award, criteria, and nomination materials, please see below or the awards web page maintained by Faculty Affairs/Office of the Provost: https://www.ndsu.edu/facultyaffairs/awards/.

The **Faculty Awards and Recognition Committee will review all nominations and select finalists** for each award based upon the candidate's nomination materials after the stated deadline. Please see the [awards web page](#) for information about the awards committee and nominations received in the last three years.

If you have any questions about these upcoming awards, please contact Canan Bilen-Green (canan.bilen.green@ndsu.edu, 231-7040).

BECOME A REVIEWER FOR GRANT PROPOSALS

Serving as a grant reviewer for a funding agency is one of the best ways to improve your own grantsmanship. It allows you to become familiar with the grant process, the funding agency, and the specific funding program for which you are reviewing. Additionally, having the opportunity to read and evaluate proposals can provide insight on what makes a proposal successful as well as what things to avoid.

You do not need to wait for an invitation to be a reviewer - you can volunteer to serve on a panel. Most agencies are continually looking for additional reviewers. You can let your program officer know that you are interested in being on a review panel, or, for some agencies, you can volunteer through a web portal or published process. Learn more:

- [National Science Foundation](#)
- [National Institutes of Health](#)

- [National Endowment for the Humanities](#)

FUNDING OPPORTUNITIES

NDSU Research and Creative Activity Funding Opportunities

- *Research Development Travel and Conference Support Awards* help defray expenses for faculty presenting at national conferences (virtual or on-site) or for supporting travel to visit archives or special collections. As this pool of funding is limited, please consider allowing individuals who do not have other sources of travel funding to apply for this opportunity.
- *Research Support Services Awards* help defray the costs of support services required for research, creative, or scholarly activity. For example, funds may be used in one of the NDSU Core Facilities, another recharge / service center, or for transcription services.
- *Research Development Funding Agency Visit Travel Awards* help defray expenses for faculty traveling to meeting with Program Officers / Program Directors at funding agencies. This program requires a 1:1 match from the applicant's department and / or college.

More information and application instructions are posted on the [RCA website.](#)

ND EPSCoR: STEM Research and Education – NDSU specific announcement

The ND EPSCoR State Office's mission is to support efforts of participating institutions of higher education across the state that result in increased STEM research capacity and competitiveness; a stronger STEM pathway that produces our next generation workforce, educators, and researchers; and an informed citizenry that values the STEM ecosystem and economy. Thus, the NDSU campus of ND EPSCoR is now accepting proposals to fund STEM activities. For details, see the [Request for Proposals](#).

See all ND EPSCoR opportunities [here](#).

Deadline: October 27, 2022; 12pm (noon)

NSF: Environmental Engineering

The goal of the Environmental Engineering program [[PD 20-1440](#)] is to support potentially transformative fundamental research that applies scientific and engineering principles to

1. prevent, minimize, or re-use solid, liquid, and gaseous discharges of pollution to soil, water, and air by closing resource loops or through other measures;
2. mitigate the ecological and human-health impacts of such releases by smart / adaptive / reactive amendments or manipulation of the environment, and
3. remediate polluted environments through engineered chemical, biological, and / or geo-physical processes.

Major areas of interest include (but are not limited to):

- Building a future without pollution or waste.
- Sustainable supply and protection of water.
- Environmental chemistry, fate, and transport of nutrients and contaminants of emerging concern in air, water, soils, and sediments.
- Environmental engineering of the built environment.

Proposals are accepted anytime

RECENTLY FUNDED GRANTS

- Harun Pirim (PI). Functional elucidation of virulence associated proteins encoded by Flavobacterium columnare, an important fish pathogen. $109,954 from the National Institute of Food & Agriculture. 8/16/2022 - 7/31/2024.

RECENTLY SUBMITTED PROPOSALS

- Zhulu Lin (PI), Xinhua Jia (CPI). PARTNERSHIP: Establishing and Managing Vegetated Buffer Strips to Reduce Phosphorus Contribution from Agricultural Land in Cold Climate Regions $900,000 from the National Institute of Food & Agriculture. 3/1/2023 - 2/28/2026.
- David Grewell (PI). Collaborative Research: REU Site: Center for Bioplastics and Biocomposites. $242,859 from the National Science Foundation. 3/1/2023 - 2/28/2026.
- Youjin Jang (PI), Inbae Jeong (CPI). A Smart IoT Dashcam-based Road Debris Reporting System for Highway Safety. $134,999 from the National Academies. 4/1/2023 - 3/31/2025.
- Long Jiang (PI). Cotton Plant Derived Synthetic Leather: Toward Industrial Production. $77,520 from Cotton Incorporated. 1/1/2023 - 12/31/2023.
- Jessica Lynne Lattimer Vold (CPI), Chad A Ulven (CPI). NRT: SUSTAINABLE ENTREPRENEURSHIP AND MATERIALS SCIENCE (SEAMS). $3,000,000 from the National Science Foundation. 9/1/2023 - 8/31/2029.
- Mijia Yang (PI), Shuvashis Dey (CPI), Surya Sarat Chandra Congress (CPI). Development and systems-integration of low-cost sensors to track survivability of road signs. $173,536 from the MN Department of Transportation. 7/1/2023 - 6/30/2025.
- Youjin Jang (PI), Zhibin Lin (CPI), Danling Wang (CPI), Inbae Jeong (CPI), Chau Le (CPI). Enhanced safety of highway construction site using low cost, wearable sensor network. $149,974 from the MN Department of Transportation. 7/1/2023 - 6/30/2025.
- Inbae Jeong (PI), Youjin Jang (CPI). Human-centered Testing of Rear-facing Display to Reduce Vehicle Collisions with Snowplows. $129,165 from the MN Department of Transportation. 7/1/2023 - 6/30/2025.

RECENT PUBLICATIONS

For 2022, 91 publications by authors with the College of Engineering affiliation have appeared in various journals, according to the ISI Web of Science and submissions from faculty. Here are some of the most recent publications:

- Abusnaina, Ahmed, Mohammed Abuhamad, Hisham Alasmary, Afsah Anwar, Rhongho Jang, Saeed Salem, Daehun Nyang, and David Mohaisen. 2022. "DL-FHMC: Deep Learning-Based Fine-Grained Hierarchical Learning Approach for Robust Malware Classification." *IEEE Transactions on Dependable and Secure Computing* 19 (5): 3432–47. https://doi.org/10.1109/TDSC.2021.3097296.

See your name on this list? Help us get the word out about your amazing work by submitting it as a **Breakthrough Alert**. **This online form** is an easy, step-by-step guide for summarizing published research for the general public.

College Happenings is distributed to the NDSU College of Engineering staff and faculty every other Tuesday.

Read past issues of *College Happenings* here.

Deadline for submissions to *College Happenings* is 12:00 p.m. Fridays.

Contact kyle.bosch@ndsu.edu to submit items for *College Happenings*.

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