

# COLLEGE HAPPENINGS

May 14, 2024

## IN THE NEWS

[NDSU Design, Build, Fly team soars to new heights](#)

[Students share their NDSU experiences](#)

[NDSU club making snowmobiles more eco-friendly makes history at national competition](#)

[NDSU Extension engineer to retire after 44 years](#)

## CONGRATULATIONS

**Sharad Jaswandkar**, a graduate student in the **Department of Civil, Construction and Environmental Engineering**, has been named the 2024 College of Engineering Graduate Research Assistant of the Year.

**Tofatun Jannat**, a graduate student in the **Department of Civil, Construction and Environmental Engineering**, has been named the 2024 College of Engineering Graduate Teaching Assistant of the Year.

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

Wednesday, May 15, **UAS Workshop with Grand Sky**. Interested in learning more about UAS? You're cordially invited to a workshop facilitated by the NDSU UAS Network and Grand Sky. 1:00 – 4:00 p.m. in the Memorial Union Badlands Conference Room. [Register Here](#)

Thursday, May 16, **Fulbright U.S. Scholar Program Virtual Open House**. In this interactive session, representatives from 10 Fulbright Commissions across Europe and Eurasia will be available to discuss their awards and answer your questions. 12:00 – 1:30 p.m. [Register Here](#)

Tuesday, May 21, **Dr. Ken Hellevang Retirement Reception**. Ken will be retiring from NDSU after 44 years of service. An open-house celebration goes from 1:00 - 4:00 p.m. in Ladd Hall 114 with a small program at 1:30. Light refreshments will be served.

## REQUEST FOR ORIENTATION VOLUNTEERS

Student Success Programs is requesting volunteers to assist guests during Orientation dates in June. Volunteers will guide groups to different areas on campus. This is an opportunity to showcase NDSU's hospitality and student focus to the newest members of the NDSU community.

Thank you for helping to make Orientation a success and to help students and their guests know they have made an excellent decision to attend NDSU! [SIGN UP HERE](#)

## PROPOSALS FOR ANNUAL FACULTY AND STAFF CONFERENCE

You are invited to [submit a proposal](#) for the annual Faculty & Staff Academic Conference to be held, Friday, August 23<sup>rd</sup>. NDSU's annual Faculty & Staff Conference is an opportunity to share ideas and developments across research, instruction, and other topics of interest to faculty and staff. The concurrent sessions will be 45 minutes in length, and should support faculty and/or staff development.

**Proposals are due by Monday, June 17<sup>th</sup>.**

Visit the Office of Teaching and Learning's [conference website](#) to learn more about this year's conference. Questions can be directed to [Stacy.Duffield@ndsu.edu](mailto:Stacy.Duffield@ndsu.edu)

## FUNDING OPPORTUNITIES

### University Research Collaboration Program Round 2

North Dakota State University and the University of North Dakota have issued a joint call for the University Research Collaboration Program which is funded by the Economic Diversification Research Funds (EDRF) appropriated in the 2023 Legislative session. The University Research Collaboration Program has selected a first round of awards of up to \$50,000. The EDRF funds are targeted at stimulating economic activity across the state through innovation of new technology, concepts, and products and promoting job creation and career and wage growth while providing experiential learning opportunities for students. The URCP requires projects to include faculty from UND and NDSU along with faculty or students from a third North Dakota institution. A call next fiscal year is also anticipated for the year two funds.

*Deadline: June 5, 2024 [Learn more and apply >>](#)*

### DCL: Joint NSF and USDA National Institute of Food and Agriculture Funding Opportunity: Supporting Foundational Research in Robotics (FRR)

The National Science Foundation (NSF), in collaboration with United States Department of Agriculture National Institute of Food and Agriculture (USDA/NIFA), seeks proposals to advance foundational research in agricultural robotics. These proposals should be of mutual interest to the NSF Foundational Research in Robotics (FRR) program and to USDA/NIFA. [Read full DCL >>](#)

## RECENTLY AWARDED GRANTS

- Xiaoyu Feng (Principal Investigator), Clairmont Clementson (Co-PI), Leon George Schumacher (Co-PI), Ademola Ayodeji Ajayi-Banji (Co-PI). Techno-economic analysis of a novel hydrothermal carbonization pre-treatment technology for methane production. \$71,941 from the ND Department of Agriculture. 1/1/2024 - 9/30/2024.
- Zhulu Lin (Principal Investigator), Rob Proulx (Co-PI). North Dakota Statewide Irrigation Feasibility Study. \$66,100 from the ND Irrigation Association. 4/1/2024 - 12/31/2024.

## RECENTLY SUBMITTED PROPOSALS

- Shuvashis Dey (Principal Investigator), Benjamin Davis Braaten (Co-PI). Towards Smart Antenna system for Satellite-Based Internet of Things (IoT) Using Artificial Intelligence (AI). \$611,082 from the National Science Foundation. 10/1/2024 - 9/30/2027.

- Trung Bao Le (Principal Investigator). RII TRACK-4: NSF: AN EXASCALE COMPUTATIONAL FRAMEWORK FOR HIGH-FIDELITY SIMULATIONS OF RIVER HYDRODYNAMICS. \$209,958 from the National Science Foundation. 1/1/2025 - 12/31/2026.
- Trung Bao Le (Principal Investigator). Particle-continuum coupling for multi-scale simulation of fluid flows. \$1,258,242 from the Department of Energy. 1/1/2025 - 12/31/2029.
- Sulaymon Eshkabilov (Principal Investigator). EPSCoR Research Fellows: NSF: High-speed ISOBUS system for site-specific tillage. \$271,448 from the National Science Foundation. 5/1/2025 - 4/30/2027.
- Youjin Jang (Principal Investigator), Inbae Jeong (Co-PI). CIVIC-PG Track A: Disaster Response Metaverse (DRM) for Enhancing Community Engagement Through Immersive, Interactive Experiences. \$35,000 from the National Science Foundation. 11/15/2024 - 5/15/2025.
- Amanda Jo Cordova (Principal Investigator), Justin V Benna (Co-PI), Tamara Uselman (Co-PI). North Dakota Partnerships to Advance Aspiring K-12 Educational Leaders. \$150,000 from the Department of Education. 6/1/2024 - 5/31/2026.
- Danling Wang (Principal Investigator). Collaborative Research: ENG-SEMICON: Low-Energy Sensing and Actuation Systems Incorporating NEMS Logic Gates with Direct Inputs from Sensors. \$169,121 from the National Science Foundation. 1/1/2025 - 12/31/2027.
- Armstrong Aboah (Principal Investigator), Ying Huang (Co-PI). Predicting Winter Severity Index: Interactive Web Platform. \$100,000 from the Iowa Department of Transportation. 10/3/2024 - 4/30/2026.
- Armstrong Aboah (Principal Investigator). Engineering Countermeasures to Mitigate Reckless Driving Behavior. \$50,000 from the Wisconsin Department of Transportation. 8/16/2024 - 8/15/2025.
- Jessica Lynne Lattimer Vold (Principal Investigator), Ali Amiri (Co-PI), Yildirim Bora Suzen (Co-PI). M2M X-Hab: Autonomous Robotic Assembly and Construction of Artemis Base Camp 2040. What would that look like? \$14,500 from the National Space Grant Foundation. 8/1/2024 - 5/31/2025.
- Igethinathane Cannayen (Principal Investigator). Integrated Solutions for Advancing Alfalfa Yield Enhancement, Disease Management, and Sustainable Product Development in Northern Great Plains. \$62,186 from the National Institute of Food & Agriculture. 9/30/2024 - 9/29/2027.
- Jeremy A Straub (Principal Investigator). GenCyber 2025 Sub-Award. \$63,002 from the National Security Agency. 1/1/2025 - 12/31/2025.

## RECENT PUBLICATIONS

For 2024, 53 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:

- Baffoe-Twum, Edmund, Eric Asa, Bright Awuku, and Adikie Essegbey. "Investigating Trends in Traffic Count Data Utilizing Exploratory Data Analysis and Regression Analysis." *JOURNAL OF STATISTICS AND MANAGEMENT SYSTEMS* 27, no. 3 (April 2024): 535–68. <https://doi.org/10.47974/JSMS-964>.
- Duah, John Owusu, Armstrong Aboah, and Stephen Osafo-Gyamfi. "DivNEDS: Diverse Naturalistic Edge Driving Scene Dataset for Autonomous Vehicle Scene Understanding." *IEEE ACCESS* 12 (2024): 60628–40. <https://doi.org/10.1109/ACCESS.2024.3394530>.
- Pandey, Ramsharan, Ghasideh Pourhashem, and Adam C. Gladen. "Screening of Salt Hydrates and Cellulose Nanocrystal Composites for Thermochemical Energy Storage Using Life Cycle Assessment." *SUSTAINABLE MATERIALS AND TECHNOLOGIES* 40 (July 2024): e00889. <https://doi.org/10.1016/j.susmat.2024.e00889>.
- Rai, Nitin, and Xin Sun. "WeedVision: A Single-Stage Deep Learning Architecture to Perform Weed Detection and Segmentation Using Drone-Acquired Images." *COMPUTERS AND ELECTRONICS IN AGRICULTURE* 219 (April 2024): 108792. <https://doi.org/10.1016/j.compag.2024.108792>.

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](mailto:kyle.bosch@ndsu.edu) to submit items for *College Happenings*.

Follow the College of Engineering on social media.

