

COLLEGE HAPPENINGS

November 12, 2024

IN THE NEWS

[Transfer to NDSU](#)

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

Wednesday, November 13, **Academic Programs Fair**. Designed to introduce staff to the easiest path to professional development. Visit with departments about their offerings and learn about the student supports that are in place for staff who take classes. 2:00 p.m. in the Memorial Union Ballroom.

Monday, December 2, **Exploring NSF CAREER Awards**. Join RCA staff to learn more about earning an NSF CAREER Award and the Spring NSF CAREER Award Bootcamp. 12:00 – 1:00 p.m. MU Meadowlark or Zoom. [Register Here](#).

Tuesday, December 10, **Winter Senior Design Expo**. The Winter Senior Design Expo will showcase capstone projects from the Department of Electrical and Computer Engineering and the Department of Mechanical Engineering. 11:00 a.m. – 3:00 p.m. in the Oceti Sakowin Ballroom.

Thursday, December 19, **Ring and Pin Ceremony**. The biannual Ring and Pin Ceremony. This ceremony is a blending of two significant and celebratory events, the [Order of the Engineer](#) and the [Pledge of the Computing Professional](#). The ceremony begins at 5:30 p.m. in the Anishinaabe Theater.

Friday, December 20, **Winter Commencement**. All colleges will take part in a single commencement ceremony at 2 p.m. at the Sanford Health Athletic Complex. Please complete and submit the [Faculty/Staff Commencement Participation Form](#) by Friday, December 6th at 5:00 p.m. if you plan to participate in the Commencement procession.

NDSU DAY OF HONOR

NDSU Day of Honor commemorates the lives of NDSU students, faculty, and staff who have passed away during the 2024 calendar year. The annual ceremony, first held in 2013, offers attendees closure, reverence, and a sense of community in remembering those no longer with us.

The NDSU Day of Honor memorial service will be held on Tuesday, February 11, 2025, at 2:00 p.m. in the Oceti Sakowin Ballroom. The service will be streamed via Zoom for those who wish to join virtually. All NDSU students and employees, as well as family and friends of the honorees are invited.

If you know of a member of our campus community who passed away in 2024, please visit the [NDSU Day of Honor webpage](#) to complete a submission form. Submission forms will be accepted through Friday, January 31st.

2025 ROBOTICS COMPETITION SEASON

Robotics competition season is fast approaching and the NDSU College of Engineering hosts 2 FIRST Regional Qualifiers.

- FIRST LEGO League (FLL) tournament for students in grades 4-8 is Saturday, January 18 from 8:00AM – 5:00PM [FIRST LEGO League Game and Season | FIRST \(firstinspires.org\)](#)
- FIRST Tech Challenge (FTC) competition for students in grades 7-12 is Saturday, January 25 from 8:00AM – 5:00PM [FIRST Tech Challenge Game and Season | FIRST \(firstinspires.org\)](#)

In order to make these tournaments a rewarding experience for the students, we need 20-30 volunteers at each event. Volunteers can participate at many different levels from being a Judge of team presentations to Refereeing robotic matches to Hospitality such as Team Check-in or Field Reset. The depth of your involvement is up to you. Please use this Google form [2025 NDSU FIRST Robotics Volunteer Form \(google.com\)](#) to indicate which competition and position you are interested in. From there, you will be sent more detailed information about your position and the events.

FUNDING OPPORTUNITIES

There has never been a better opportunity to increase NDSU's success with the National Science Foundation (NSF), because the CHIPS and Science Act of 2022 authorized increasing percentages of budget to go to states like North Dakota.

More than \$1B of NSF's research budget has been designated in the current fiscal year for regions like ours, but submissions of proposals to the NSF from EPSCoR jurisdictions are dropping. In 2023, NDSU researchers submitted only 63 proposals, with a 29% funding rate.

Join NDSU VPR Colleen Fitzgerald and Associate Vice President for Research Development Heidi Grunwald **Friday, November 15 from 10:00 - 11:00 a.m. in the Hidatsa Room of the Memorial Union or on [ZOOM](#)** as they discuss strategies for increasing your competitiveness on NSF proposals by targeting the NSF mechanisms that are a right fit for you. More proposals will mean more awards.

- Increased dollars are being directed to ND by the NSF -- now is the time to increase your NSF competitiveness
- Learn how to improve your NSF competitiveness and take advantage of INCREASED NSF funding to ND
- Learn how to submit smarter to the NSF and increase your competitiveness
- There's never been a better time to go after NSF funding – learn how to best optimize your proposals and win more awards

[Register Here](#)

RECENTLY AWARDED GRANTS

- Long Jiang (Principal Investigator). Transforming Carbon Fiber Reinforced Polymer Wastes into Recyclable Structural Automotive Components. \$220,154 from the Department of Energy. 8/1/2024 - 11/30/2025.
- 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. 10/1/2024 - 3/31/2025.

RECENTLY SUBMITTED PROPOSALS

- Shuvashis Dey (Principal Investigator), Umamaheswara Rao Tida (Co-PI), Kushal Kumar Ponugoti (Co-PI). IRES: International Research Experience on RFID Sensing System with Application of Machine Learning for Accurate Sensing. \$450,000 from the National Science Foundation. 5/1/2025 - 4/30/2028.

- Sulaymon Eshkabilov (Principal Investigator). DSFAS PARTNERSHIP: Machine Learning Approaches for Determining Vegetable Quality and Growth Dynamics in a Controlled Agricultural Environment. \$178,121 from the National Institute of Food & Agriculture. 5/1/2025 - 4/30/2028.
- Guiping Yan (Principal Investigator), Richard Wade Webster (Co-PI), Lu Liu (Co-PI). Utilization of Artificial Intelligence (AI) for Efficient Detection and Quantification of Soybean Cyst Nematode. \$20,774 from the ND Soybean Council. 7/1/2025 - 6/30/2026.
- Ademola Monsur Hammed (Principal Investigator), Niloy Chandra Sarker (Co-PI), Clairmont Clementson (Co-PI), Ewumbua Monono (Co-PI). Storability of hay bale using corn-based-biodegradable material. \$36,110 from the ND Corn Utilization Council. 7/1/2025 - 6/30/2026.
- Ademola Monsur Hammed (Principal Investigator), Niloy Chandra Sarker (Co-PI), Clairmont Clementson (Co-PI). Development of Polyurethane Biomaterial from Corn Oligosaccharide. \$36,900 from the ND Corn Utilization Council. 7/1/2025 - 6/30/2026.
- Joao Paulo Cassol Flores (Principal Investigator), Joseph T Ikley (Co-PI). Integrating drone imagery and a self-propelled sprayer to implement SSWC in soybeans. \$27,068 from the ND Soybean Council. 7/1/2024 - 6/30/2025.
- Clairmont Clementson (Principal Investigator), Ademola Monsur Hammed (Co-PI), Niloy Chandra Sarker (Co-PI). Development of a particle-based-board from corn origin. \$45,910 from the ND Corn Utilization Council. 7/1/2025 - 6/30/2026.
- Clairmont Clementson (Principal Investigator), Ibukunoluwa Omotola Ajayi-Banji (Co-PI), Kenneth Hellevang (Co-PI). Assessing the storability of white-mold infected soybeans. \$52,200 from the ND Soybean Council. 7/1/2025 - 6/30/2026.
- Ying Huang (Principal Investigator), Luyang Xu (Co-PI), Xingyu Wang (Co-PI). Bridge Deck Strategy: Materials and Reinforcement. \$200,000 from the Iowa Department of Transportation. 1/15/2025 - 1/15/2027.
- Ying Huang (Principal Investigator), Erin Hanora Gillam (Co-PI). AI-powered multi-scale multi-modal monitoring of birds and bats around offshore wind farms. \$400,000 from the Department of Energy. 10/1/2025 - 9/30/2029.
- Yan Zhang (Principal Investigator). Center for Shape the Future of Precision Floating Wind Farm. \$233,063 from the University of Texas Arlington. 8/16/2025 - 5/15/2028.
- Igathinathane Cannayen (Principal Investigator). Prospects of Modern Circular Bioeconomy Application to Corn Production. \$57,243 from the ND Corn Utilization Council. 7/1/2025 - 6/30/2027.

RECENT PUBLICATIONS

For 2024, 126 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:

- Afrin, Tanzina, Nita Yodo, Arup Dey, and Lucy G. Aragon. "Advancements in UAV-Enabled Intelligent Transportation Systems: A Three-Layered Framework and Future Directions." *APPLIED SCIENCES-BASEL* 14, no. 20 (October 2024): 9455. <https://doi.org/10.3390/app14209455>.
- Ali, Asad, Mingwei Guo, Salman Ahmad, Ying Huang, and Pan Lu. "Optimizing Wildfire Evacuations through Scenario-Based Simulations with Autonomous Vehicles." *FIRE-SWITZERLAND* 7, no. 10 (October 2024): 340. <https://doi.org/10.3390/fire7100340>.
- Riaz, Anisa, Nof Yasir, Gul Badin, and Yasir Mahmood. "Innovative Pavement Solutions: A Comprehensive Review from Conventional Asphalt to Sustainable Colored Alternatives." *INFRASTRUCTURES* 9, no. 10 (October 2024): 186. <https://doi.org/10.3390/infrastructures9100186>.
- Rui, Z., Z. Zhang, M. Zhang, A. Azizi, C. Igathinathane, H. Cen, S. Vougioukas, et al. "High-Throughput Proximal Ground Crop Phenotyping Systems - A Comprehensive Review." *COMPUTERS AND ELECTRONICS IN AGRICULTURE* 224 (September 2024): 109108. <https://doi.org/10.1016/j.compag.2024.109108>.
- Sommer, Dominique M., Jennifer M. Young, Xin Sun, Giancarlo Lopez-Martinez, and Christopher J. Byrd. "Are Infrared Thermography, Feeding Behavior, and Heart Rate Variability Measures Capable of Characterizing

Group-Housed Sow Social Hierarchies? (Vol 101, Skad143, 2023).” *JOURNAL OF ANIMAL SCIENCE* 102 (February 22, 2024): skae043. <https://doi.org/10.1093/jas/skae043>.

- Zhang, Xiaomo, Gary Feng, and Xin Sun. “Advanced Technologies of Soil Moisture Monitoring in Precision Agriculture: A Review.” *JOURNAL OF AGRICULTURE AND FOOD RESEARCH* 18 (December 2024): 101473. <https://doi.org/10.1016/j.jafr.2024.101473>.

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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