

# COLLEGE HAPPENINGS

June 11, 2024

## FROM THE INTERIM DEAN

### Fall Enrollment Numbers

With the recent declines in undergraduate enrollment at NDSU, we have placed a greater emphasis over the past several years on the recruitment and retention of students. We are facing significant headwinds, including a drop in the number of high school graduates (due to declining birthrates), fewer students seeking four-year college degrees, and increased efforts by many surrounding states to encourage their students to enroll at in-state schools through various incentive programs. Notably, the North Star Promise Scholarship program recently enacted by the state of Minnesota offers a full tuition-free pathway for eligible Minnesota residents to obtain a degree from a public institution if they enroll at an in-state college or university. Since approximately 60% of our students in the College of Engineering are Minnesota residents, this program has the potential to significantly impact our future enrollments.

Despite these challenges, I am very pleased to report that the number of new students (including first-year and transfer students) who have committed to enroll in the College of Engineering at NDSU this fall is up over 12% compared to the same time last year. While the numbers may still change throughout the summer, this is an outstanding development and a strong indication that our efforts are paying off. We are introducing new programs in high-demand areas, increasing accessibility through the implementation of remote learning options, designing a new facility that will enhance our in-person collaborative learning opportunities, and expanding services to improve student retention. Collectively, we are rising to the challenge and demonstrating that a degree from the NDSU College of Engineering is a ticket to a professional career full of unlimited opportunities.

Thank you for your ongoing efforts to make NDSU a top choice for students looking to pursue a degree in engineering, computer science, and construction management. I hope you all have a great summer!

**Alan R. Kallmeyer, Ph.D.**

**Interim Dean | College of Engineering**

## IN THE NEWS

[NDSU researchers working to revolutionize Standing Rock energy landscape](#)

[PhD student Himani Yadav discusses her research on microplastics](#)

## 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

Monday, July 15, **STEM Kids Camp Week 1**. Students in grades K-8 will be on campus and around the College of Engineering for a variety of summer kids camps focused on topics in STEM.

Monday, July 22, **STEM Kids Camp Week 2**. Students in grades K-8 will be on campus and around the College of Engineering for a variety of summer kids camps focused on topics in STEM.

Monday, July 29, **Explore Engineering High School Camp**. This week-long camp introduces students to the different disciplines of engineering. Mornings will be spent on campus working with NDSU faculty in the labs and in the afternoons students will be going out on engineering industry visits.

## SAFE ZONE TRAININGS

The Office of the Provost will be offering the Safe Zone Training series. Safe Zone is a program designed to:

- Educate people about sexual orientation and gender identity/expression issues.
- Create a visible network of Allies to provide support to the NDSU lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ+) community.
- Provide accurate information about sexual orientation and gender identity/expression diversity, issues, and resources within the community

Dates offered:

- Level 1 “Becoming an Ally”, Tuesday, July 16, from 10:00 am- Noon via zoom (zoom link will be sent out to those registered a couple days prior)
- Level 2 “Gender Identity and Expression” Tuesday, July 23, from 10:00 am - noon via zoom (zoom link will be sent out to those registered a couple days prior)
- Level 3 “Upstander”, Tuesday, July 30 from 10:00 am - noon via zoom (zoom link will be sent out to those registered a couple days prior)

To Register please go to the following link: [https://www.ndsu.edu/facultyaffairs/inclusion/trainings/safe\\_zone/](https://www.ndsu.edu/facultyaffairs/inclusion/trainings/safe_zone/)

## FEEDBACK ON RCA FACULTY PROGRAMMING

As the Office of Research and Creative Activity begin the process of planning for 2024-25, they would like your feedback on the programs RCA delivered during the 2023-2024 academic year to support NDSU faculty involved in all facets of research.

These programs included training opportunities across various disciplines, access to internal and external experts, opportunities for leadership growth, collaborative network building sessions, development of undergraduate research operations, and more (see below). These events were designed to help you build your knowledge, expand your funded research portfolio, and grow your network and leadership skills.

Please take a few minutes to provide your input for the upcoming year--it will help them shape our future programming offers: [https://ndstate.co1.qualtrics.com/jfe/form/SV\\_0kMFwn2A76kEclw](https://ndstate.co1.qualtrics.com/jfe/form/SV_0kMFwn2A76kEclw)

## BISONSPARK TALKS 2023 VIDEOS

In October 2023, the NDSU Office of Research and Creative Activity held the first-ever BisonSpark Talks. The event's goals included served to spark interest, ideas, and collaborations across our research community.

These 5-minute stories served to highlight some of the amazing research happening in various disciplines at NDSU and in our community. The presentations are all available on demand on the RCA website. [Watch BisonSpark Talks 2023 videos](#)

## FUNDING OPPORTUNITIES

### Seed Research Proposal for AI SUSTEIN Program

The AI SUSTEIN program funded by NSF Track-2 EPSCoR is calling for seed research proposal for 2024-2025 year. More details of the proposal call please refer to the attached proposal call including eligibility, expectation, application packages, and review criteria. Some brief information of the proposal is listed below for your reference:

#### Funding Information:

1. \$15,000 (net/not subjected to F&A) for one year.
2. Number of awards: at least one.
3. Award period: August 16, 2024 to August 15, 2025. Co-PI and no-cost extension are not expected.

#### Application Submission:

Please e-mail a single pdf copy of the application package to Kirstin Saulsbury at [kirstin.saulsbury@ndsu.edu](mailto:kirstin.saulsbury@ndsu.edu) by 5:00 PM on July 8, 2024 (Email Subject: 2024 AI SUSTEIN seed grant application). Incomplete or late applications will be returned without review. The applicants will be notified of the application outcome via e-mail on August 8th, 2024. A brief review will be provided along with the notification.

### NDSU Foundation 2024 Impact Fund Grant Program

The Impact Fund Grant Program provides funding for projects that make a significant impact on excellence and the educational experience for students at North Dakota State University. This program is supported by annual contributions from alumni and friends of the University.

Applications are accepted from faculty, staff, and recognized student groups. The Impact Fund Grant Program offers grants of \$20,000 to \$75,000. Find more information on the [NDSU Foundation website](#).

The application deadline is Wednesday, July 24, 2024, by 4:30 p.m.

Questions? Email Janna Swanson, Grants Committee Staff Liaison, at [janna.swanson@ndsufoundation.com](mailto:janna.swanson@ndsufoundation.com).

## RECENTLY AWARDED GRANTS

- Carrie Miranda (Principal Investigator), Joao Paulo Cassol Flores (Co-PI). SOYGEN3: Building Capacity to Increase Soybean Genetic Gain for Yield and Composition through Combining Genomics-Assisted Breeding with Characterization of Future Environments. \$54,644 from the North Central Soybean Research Program. 10/1/2023 - 9/30/2024.
- Xin Sun (Principal Investigator). Palmer Amaranth UAS Grant Program. \$93,840 from the Department of Treasury. 3/1/2024 - 12/31/2024.
- Anne Denton (Principal Investigator). Internship at Kirkwall. \$7,787 from Kirkwall Defense, Inc. 5/20/2024 - 5/20/2025.

## RECENTLY SUBMITTED PROPOSALS

- Youjin Jang (Principal Investigator), Inbae Jeong (Co-PI), Caroline E Hackerott (Co-PI). Collaborative Research: IoT-enabled thermal needs-aware post disaster shelters. \$495,137 from the National Science Foundation. 8/1/2024 - 7/31/2027.

- Ying Huang (Principal Investigator), Dinesh R Katti (Co-PI), Jun Kong (Co-PI), Pan Lu (Co-PI). Enhancing Pipeline Safety: A Framework for Integrating Climate and Geohazard Data into a User-friendly Unified Database. \$535,000 from the Department of Transportation. 10/1/2024 - 3/31/2026.
- Kalpana Katti (Principal Investigator), Jiha Kim (Co-PI), Dinesh R Katti (Co-PI). Evaluating Metastatic Potential and Lethality of Breast Cancer using Fluid Flow Enabled Metastasis Testbeds. \$846,915 from the U.S. Army. 7/1/2025 - 6/30/2028.
- Deirdre Anne Voldseth (Principal Investigator), Clairmont Clementson (Co-PI), Gautam Prasad Pradhan (Co-PI). SAWFLIES: Sustaining Agronomy of Wheat for the Future by Leveraging Interdisciplinary Expertise in Science. \$1,381,382 from the National Institute of Food & Agriculture. 8/1/2025 - 7/31/2030.
- Ghodrat Karami (Principal Investigator). Vehicle Load Mapping to Reduce Maintenance and Sustainment Costs-Phase II. \$434,452 from the Department of Defense. 8/16/2024 - 8/15/2026.
- Juan Li (Principal Investigator). Adapt: Personalized Conversational AI Support for Care of Alzheimer's and Related Dementia. \$145,000 from the National Institutes of Health. 4/1/2025 - 3/31/2027.
- Shuvashis Dey (Principal Investigator), Benjamin Davis Braaten (Co-PI). Towards Smart Antenna System for Satellite-Based Internet of Things (IoT) Using Artificial Intelligence (AI). \$689,461 from the National Science Foundation. 12/1/2024 - 11/30/2027.
- Xinhua Jia (Principal Investigator), Syeed Md Iskander (Co-PI), Jiale Xu (Co-PI). Distribution, transformation, and mitigation of PFAS in organic waste compost. \$310,000 from the U.S. Geological Survey. 1/1/2025 - 12/31/2027.

## RECENT PUBLICATIONS

For 2024, 64 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:

- Akhtar, Javed, Jimli Goswami, and Himangshu Prabal Goswami. "Geometric Phaselike Effects of Driven Transport in Presence of Reservoir Squeezing." *PHYSICAL REVIEW E* 109, no. 5 (May 21, 2024): 054122. <https://doi.org/10.1103/PhysRevE.109.054122>.
- Akinlalu, Alfred, Zachariah Flaten, Komila Rasuleva, Saimon Mia, Aaron Bauer, Santhalingam Elamurugan, Nega Ejjigu, et al. "Integrated Proteomic pro Fi Ling Identi Fi Es Amino Acids Selectively Cytotoxic to Pancreatic Cancer Cells." *INNOVATION* 5, no. 3 (May 6, 2024): 100626. <https://doi.org/10.1016/j.xinn.2024.100626>.
- Badin, Gul, Naveed Ahmad, Ying Huang, and Yasir Mahmood. "Evaluation of Pigment-Modified Clear Binders and Asphalts: An Approach towards Sustainable, Heat Harvesting, and Non-Black Pavements." *INFRASTRUCTURES* 9, no. 5 (May 2024): 88. <https://doi.org/10.3390/infrastructures9050088>.
- Chowdhury, Shamma Tasneem, Clairmont L. Clementson, and Emmanuel Baidhe. "Investigating the Physical Properties of Corn Varieties." *JOURNAL OF THE ASABE* 67, no. 3 (2024): 631–39. <https://doi.org/10.13031/ja.15769>.
- Daghighi, Amirreza, Gerardo M. Casanola-Martin, Kweeni Iduoku, Hrvoje Kusic, Humberto Gonzalez-Diaz, and Bakhtiyor Rasulev. "Multi-Endpoint Acute Toxicity Assessment of Organic Compounds Using Large-Scale Machine Learning Modeling." *ENVIRONMENTAL SCIENCE & TECHNOLOGY*, May 27, 2024. <https://doi.org/10.1021/acs.est.4c01017>.
- Oyewole, Tosin, Niloy Chandra Sarker, Gurjot Dhaliwal, Emily Biggane, and Ewumbua Monono. "Investigating the Effect of Refining Parameters on Acetic Acid Removal and the Quality of Crude Epoxidized Soybean Oil." *JOURNAL OF THE AMERICAN OIL CHEMISTS SOCIETY*, May 28, 2024. <https://doi.org/10.1002/aocs.12866>.
- Rehovsky, Chad, Dilpreet S. Bajwa, Sanku Mallik, Jessica E. Pullan, and Ismat Ara. "Natural Polymer Hydrogel Based 3D Printed Bioreactor Testing Platform for Cancer Cell Culture." *MATERIALS TODAY COMMUNICATIONS* 39 (June 2024): 108925. <https://doi.org/10.1016/j.mtcomm.2024.108925>.

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.

