

COLLEGE HAPPENINGS

August 20, 2024

FROM THE INTERIM DEAN

Welcoming back the herd

Next week, we will watch campus roar back to life as students return for the start of fall semester. This is always an exciting time of year as we welcome back our returning students and greet our first-time enrollees who have chosen NDSU for their collegiate education. For some of these new students, the school year will also bring some uncertainty and anxiety, as many will be leaving the safety and comfort of home to begin the next chapter of their life in Fargo. Please join me in welcoming these students to campus and reassuring them that they made a great choice to join the Bison family.

The start of the fall semester this year will also bring some additional challenges for students in the College of Engineering due to the significant construction project that began just a few weeks ago. This project has forced the closure of several building entrances and thruways that students are accustomed to using to navigate between buildings in the engineering complex. During the first few days of the semester, please help students find their way to their classrooms, and exercise a little extra patience if students are running a few minutes late to class as they figure out the best available path from point A to point B.

I would also like to express my sincere appreciation to all of our faculty and staff for your dedication in providing a welcoming environment and a quality education for our students. At the core of our land-grant mission lies the responsibility to create and share knowledge with our constituents, which we effectively do through a creative, collegial, and inclusive approach to education. The impact that each of you will have on our students' futures may not be immediately evident, but rest assured that your influence will be felt long after they graduate. Thank you for all you do on behalf of our students...and Go Bison!

Alan R. Kallmeyer, Ph.D.

Interim Dean | College of Engineering

IN THE NEWS

[Construction underway on transformational building project](#)

[NDSU 'spaceship' building comes down to make way for transformational engineering complex](#)

[NDSU professor earns prestigious engineering award](#)

[NDSU projects providing impactful research opportunities and prototype development](#)

CONGRATULATIONS

Kenneth Hellevang, Agricultural and Biosystems Engineering Fellow and Professor Emeritus, is the recipient of the 2024 G.B. Gunlogson Countryside Engineering award for enhancements and leadership in grain and potato storage, energy efficiency, building moisture and mold problems, and restoration of flooded buildings.

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, August 26, **Meet Your Academic Community**. Join us as we welcome the College of Engineering Class of 2028! 8:30 a.m. at the Bentson Bunker Field House. Event followed by “Walk Through the Gates” at the southeast entrance to campus.

Thursday, September 19, **College of Engineering Scholarship and Awards Reception**. Join the College of Engineering as we acknowledge our scholarship recipients and donors, and recognize the accomplishments of outstanding faculty and staff. 3:00 - 4:30 p.m. in the Memorial Union Oćefi Śakōwiŋ Ballroom.

Friday, September 20, **Richard Offerdahl ’65 Engineering Complex Groundbreaking**. Join us for a transformational day for NDSU and the College of Engineering! The ceremony is set to start at 2:00 p.m.

Wednesday, September 25, **Fall Career Expo**. The Fall Career Expo is a great opportunity to connect with employers both locally and from around the country. Whether you are looking for an internship, full-time employment, or want to learn from leaders in your industry, the Expo has opportunities for you. 11:00 a.m. – 3:00 p.m. at the Fargodome.

WELCOME WEEK VOLUNTEER OPPORTUNITIES

We are a few weeks away from students moving into the residence halls and beginning their NDSU experience! Move-In and Welcome Week are a time when our entire NDSU community can come together to help incoming students know they belong here. To make this transition a positive experience for students and their guests, we need your help.

A variety of offices have come together to develop Welcome Week volunteer opportunities from August 24-September 7, 2024. [Select your volunteer shift\(s\) here](#) and [visit the volunteer website](#) here for more information.

Additional Welcome Week Engagement Opportunities:

- Walking Through the Gates | Monday, August 26, 2024 at 10:10am
- This year we will continue the Focus on 5 initiative that began in 2021. “Focus on 5” means connecting with five students, for five minutes each, for the first five days of the academic year. This small act of outreach has the potential to make a big positive impact on a student’s NDSU experience! We would like to challenge you to “Focus on 5” during the first week of the semester.

NDSU Volunteer Passport:

Be a volunteer champion! Complete 5 of the 9 volunteer experiences during the academic year to be recognized as a volunteer champion on our campus! Volunteers Experiences include:

- [Move In Experience/Welcome Week \(August 24-September 7, 2024\)](#)
- Career Fair (September 25, 2024 and February 5, 2025)
- [Homecoming \(September 16-21, 2024\)](#)
- Late Night Breakfast (December 16, 2024 & May 12, 2025)
- Commencement (December 20, 2024 & May 17, 2025)

- Orientation (**Summer 2025**)

We are grateful for your willingness to volunteer and thankful for the impact your support has on our campus.

2024 BIOSCIENCE SUMMIT

You are invited to attend the BioScience Summit at the Avalon Events Center in Fargo on September 17 and 18. The event is a chance to meet some of the nation's leading bioscience and medical device innovators, explore opportunities for collaboration, and find partnerships that will help to build out one of the nation's fastest growing bioscience ecosystems.

NDSU's Office of Research and Creative Activity is a sponsor of the 2024 BioScience Summit and will be hosting a panel called *Leveraging Higher Education Relationships*:

- (Moderator) Cindy Graffeo, Innovation and Economic Development Director, NDSU
- Teresa Connor, Dean of Health and Human Services, NDSU
- John McEvoy, Professor and Head of Microbiological Sciences, NDSU
- Alan Kallmeyer, Professor and Interim Dean of the College of Engineering, NDSU

The event is organized and co-hosted by the Greater Fargo Moorhead Economic Development Corporation (GFMEDC), Bioscience Association of North Dakota (BioND), North Dakota Department of Agriculture, and the North Dakota Department of Commerce.

[Get the full agenda and register for the Summit >>](#)

FUNDING OPPORTUNITIES

Developing and Demonstrating Nanosensor Technology to Detect, Monitor, and Degrade Pollutants (U.S. Environmental Protection Agency)

Continued exposure to certain PFAS, even at low levels, can cause harmful health effects. Rural and underserved communities specifically face barriers to frequent and rapid PFAS monitoring.

- This funding opportunity is soliciting research to develop and demonstrate nanosensor technology with functionalized catalysts that have the potential to degrade selected contaminants in addition to detecting and monitoring pollutants.
- Specifically, EPA is seeking proposals that use nanotechnology to detect, monitor, and degrade PFAS in groundwater or surface water that may be used as drinking water sources.

Award and Eligibility Information:

- \$1,500,000
- Public, private, nonprofits/institutions/organizations, public and private institutions of higher education.

Application deadline: Wednesday, November 13, 2024 (11:59:59 pm ET)

NSF Computer and Information Science and Engineering (CISE): Core Programs

The NSF CISE Directorate supports research and education projects that develop new knowledge in all aspects of computing, communications, and information science and engineering, as well as advanced cyberinfrastructure, through the following core programs:

- Division of Computing and Communication Foundations (CCF)
- Division of Computer and Network Systems (CNS)
- Division of Information and Intelligent Systems (IIS)

- Office of Advanced Cyberinfrastructure (OAC)

Proposers are invited to submit proposals in several project classes, which are defined as follows:

- Small Projects -- up to \$600,000 total budget with durations up to three years: projects in this class may be submitted to CCF, CNS, and IIS only;
- Medium Projects -- \$600,001 to \$1,200,000 total budget with durations up to four years: projects in this class may be submitted to CCF, CNS, and IIS only; and
- OAC Core Projects -- up to \$600,000 total budget with durations up to three years: projects in this class may be submitted to OAC only.

Deadlines: Small projects: July 18-Sept. 30, 2024; Medium/OAC Core projects: Oct 1 - Oct 23, 2024

RECENTLY AWARDED GRANTS

- Yan Zhang (Principal Investigator), Jordi Estevadeordal (Co-PI), Yildirim Bora Suzen (Co-PI), Yechun Wang (Co-PI). MRI: Acquisition of A Research Ultrasound System for Multidisciplinary Flow and Fluid-Structure Interaction Studies. \$236,193 from the National Science Foundation. 5/1/2024 - 4/30/2027.
- Long Jiang (Principal Investigator), Mohiuddin Abdul Quadir (Co-PI). SSBRI Using Nanotechnology to Enhance Fungicide Efficacy and Duration for Sugarbeet Disease Control. \$200,000 from the Agricultural Research Service. 9/1/2023 - 12/31/2025.
- Anne Denton (Principal Investigator). Internship at Kirkwall. \$3,780 from Kirkwall Defense, Inc. 7/15/2024 - 8/31/2025.

RECENTLY SUBMITTED PROPOSALS

- Armstrong Aboah (Principal Investigator), Umamaheswara Rao Tida (Co-PI), Xin Sun (Co-PI). BisonGuard: Revolutionizing Bison Management with UAVs, LiDAR, and AI for Sustainable Agriculture. \$489,355 from the Foundation for Food & Agricultural Research. 10/1/2024 - 9/30/2026.
- Syeed Md Iskander (Principal Investigator), Bakhtiyor Rasulev (Co-PI). Formulation-Driven Degradation of Plastic-Based Articles and Micro/Nanoplastic Generation Under Environmental Conditions. \$441,484 from the European Chemical Industry Council. 1/1/2025 - 12/31/2026.
- Long Jiang (Principal Investigator), Mark A Boetel (Co-PI), Raj Shankar Hazra (Co-PI). Innovative Nanofiber-Based Insecticide for Sustainable Sugarbeet Root Maggot Control. \$30,000 from the Beet Sugar Development Foundation. 4/1/2025 - 3/31/2026.
- Jiale Xu (Principal Investigator). Development of a Holistic Understanding of the De Facto Reuse in Central and Midwestern U.S. \$299,985 from the Environmental Protection Agency. 5/1/2025 - 4/30/2028.

RECENT PUBLICATIONS

For 2024, 88 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:

- Castro, Jose Pablo, Caley K. Gasch, and Paulo Flores. "Artificial Intelligence in Soil Science: Where Do We Go Now?" *AGRICULTURAL & ENVIRONMENTAL LETTERS* 9, no. 2 (December 2024): e20134. <https://doi.org/10.1002/ael2.20134>.
- Chowdhury, Sifat Karim, and Yan Zhang. "An Experimental Study of Fluid-Structure Interaction and Self-Excited Oscillation in Thin-Walled Collapsible Tube." *Physics of Fluids* 36, no. 7 (July 2, 2024): 071902. <https://doi.org/10.1063/5.0211227>.
- Koyuncu, Berkay, Lahcen Akerkouch, and Trung Le. "On the Depth-Averaged Models of Ice-Covered Flows." *ENVIRONMENTAL FLUID MECHANICS*, August 2, 2024. <https://doi.org/10.1007/s10652-024-10003-3>.

- Xu, Jiale, Ryan J. Kann, Dauda Mohammed, and Ching-Hua Huang. “Far-UVC 222 Nm Treatment: Effects of Nitrate/Nitrite on Disinfection Byproduct Formation Potential.” *ENVIRONMENTAL SCIENCE & TECHNOLOGY*, August 12, 2024. <https://doi.org/10.1021/acs.est.4c04258>.
- Yin, Dongxu, Penge Cheng, and Ying Huang. “YOLO-EPP: Multi-Scale Smoke Detection with Enhanced Pool Former and Multiple Receptive Fields.” *DIGITAL SIGNAL PROCESSING* 149 (June 2024): 104511. <https://doi.org/10.1016/j.dsp.2024.104511>.

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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