

# COLLEGE HAPPENINGS

October 17, 2023

## FROM THE INTERIM DEAN

### Students and Parents Discover NDSU

This week, NDSU will host several hundred prospective students and their families on campus as part of Discover NDSU, our largest visit event of the year. These guests will hear from faculty, staff, and current students about our academic programs and campus life, tour our facilities, and learn about the many opportunities we offer for students to become engaged across campus. Over 150 of these students have identified a major within the College of Engineering as an academic area of interest to them, and many more are undecided on a particular major. This gives us an excellent opportunity to recruit the next generation of engineers, computer scientists, and construction managers to enroll in our programs at NDSU.

Data collected by the Office of Admission demonstrates that students who visit our campus during their college search are more likely to enroll at NDSU, and we have a chance to make that number even higher by making sure their visit experience is second-to-none. These are students who have already expressed an interest in coming to NDSU and the College of Engineering, many will travel several hours to get here, most will be seeing our campus for the first time, and we want to make sure they leave dreaming about joining the Herd. We all play a role in shaping their impression of NDSU, whether it's through direct conversation, a friendly smile in passing, or by helping to make our facilities and campus environment worthy of showcasing.

Please join me in welcoming these prospective students and their families to NDSU on Thursday and Friday. As we seek to grow our undergraduate enrollments to help meet the future workforce demands across the state and region, this is an excellent opportunity to highlight the outstanding programs that we have to offer in the College of Engineering. Thank you for your ongoing efforts to help us recruit and retain students!

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

**Interim Dean | College of Engineering**

## IN THE NEWS

[College of Engineering celebrates scholarship recipients, donors](#)

## CONGRATULATIONS

Several College of Engineering faculty members are among the top 100,000 scientists in the world based upon an annual list compiled by Stanford University. The list ranks over six million researchers from 22 fields based on various basic citation indicators. The measurements include the number of citations received by the scientist's research articles and research output over the past year and career. The rankings are split into the single latest year (2022) and cumulative career scores.

## 2022 Top Researcher List

- Benjamin Braaten
- Xuefeng Chu
- Ying Huang
- Dinesh R. Katti
- Kalpana S. Katti
- Simone A. Ludwig
- Jeremy Straub

## Career Top Researcher List

- Ghodrat Karami
- Dinesh R. Katti
- Kalpana S. Katti
- Simone A. Ludwig
- Jeremy Straub
- Xiangfa Wu
- Qifeng Zhang

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, October 18, **Conference on Computational Science**. The conference is the first of its kind, bringing together researchers from various research fields and aiming to showcase and promote computational-related research at NDSU and foster interdisciplinary collaboration. Please [register here](#) by October 4.

Wednesday, October 25, **Faculty Luncheon: Best Practices of Undergraduate Research for Recruitment and Retention**. 11:30 a.m. – 1:00 p.m. in the Prairie Rose room in the Memorial Union. [REGISTER HERE](#)

Thursday, October 26, **KFI Engineers Professor of Energy Stewardship Ceremony**. Please join us for a ceremony honoring Dr. Adam Gladden. 3:00 p.m. in the NDSU McGovern Alumni Center.

Friday, October 27, **Center for Engineering and Computational Sciences Facility Kickoff**. Join us for an exciting update on fundraising progress and planning for the new College of Engineering building. 3:30-5:00 p.m. in the NDSU McGovern Alumni Center.

Wednesday, November 1, **CoE Fall Staff Meeting**. All CoE staff are invited to join College leadership for lunch, an update on the College and the opportunity to provide feedback. 11:00 a.m. – 1:00 p.m. in the Memorial Union Nueta Room.

Tuesday, November 28, **NDSU Giving Day 2023**. NDSU Giving Day is a chance to give back to the areas of the college and campus you are most passionate about. Watch for more information about the College of Engineering's exciting plans for NDSU Giving Day 2023.

Wednesday, December 6, **Fall Senior Design Expo**. 11:00 a.m. – 2:00 p.m. in the Memorial Union Océfi Śakowiń Ballroom.

Friday, December 15, **2023 Winter Commencement**. You are encouraged to participate in the 2023 Winter Commencement ceremonies which will be held on Friday, December 15th in the SHAC at 5:00 p.m. [Register Here](#).

## WORKING WITH THE CONSTRUCTION ENGINEERING RESEARCH LABORATORY

The US Army Corps of Engineers Engineer Research and Development Center (ERDC) Construction Engineering Research Laboratory ([CERL](#)) develops technologies to support the Army's ability to design, build, operate, and maintain its installations and contingency bases. CERL research areas include sustainable installations, resilient facilities and infrastructure, and smart sustainable materials.

Two representatives from CERL, Dr. Rebekah Wilson and Dr. Callie Stern, will host the following sessions on NDSU's campus:

**Faculty and staff** are invited to a session on **Working with CERL** to learn about ERDC/CERL funding programs. This session will take place on **Tuesday, October 24**, at **12:30pm** in the **Memorial Union Sahnish Room**.

[Register to attend >>](#)

**Students** are invited to a session to **learn about ERDC/CERL** and **career opportunities** with the center. This session will take place on **Tuesday, October 24**, at **3:30pm** in the **Memorial Union Sahnish Room**.

[Register to attend >>](#)

## FUNDING OPPORTUNITIES

### RCA Equipment Repair Match Fund

The Office of Research and Creative Activity has opened a request for funds from the Fiscal Year 2024 *Research Equipment Repair Matching Program*.

The Office of Research and Creative Activity has a small pool of funds available to provide a match to college or department expenditures specifically for research equipment repair that can be completed by June 15, 2024.

- For departmental / unit requests, priority will be given to equipment that is used by multiple researchers and that has a match of at least 33%.
- For Service / Recharge Centers and Core Facilities, priority will be given to requests that have at least a 50% match.

Note that funds must be spent **no later** than June 15, 2024.

Individual researchers are eligible to receive one award (one piece of equipment) per fiscal year. Applications will be reviewed on a rolling basis, and will be processed in the order received. Awards will be made until all funds are allocated. This program is for research-related equipment repair only. To apply please follow this [link >>](#)

### NSF: Communications, Circuits, and Sensing-Systems (CCSS)

The Communications, Circuits, and Sensing-Systems (CCSS) Program [[PD 18-7564](#)] supports innovative research in circuit and system hardware and signal processing techniques. CCSS also supports system and network architectures for communications and sensing to enable the next-generation cyber-physical systems (CPS) that leverage computation, communication, and sensing integrated with physical domains. CCSS invests in micro- and nano-electromechanical systems (MEMS/NEMS), physical, chemical, and biological sensing systems, neurotechnologies, and communication & sensing circuits and systems. The goal is to create new complex and hybrid systems ranging from nano- to macro-scale with innovative engineering principles and solutions for a variety of applications including but not limited to healthcare, medicine, environmental and biological monitoring, communications, disaster mitigation, homeland security, intelligent transportation, manufacturing, energy, and smart buildings. CCSS encourages research proposals based on emerging technologies and applications for communications and sensing such as high-speed communications of terabits per second and beyond, sensing and imaging covering microwave to terahertz frequencies, personalized health monitoring and assistance, secured wireless connectivity and sensing for the Internet of Things, and dynamic-data-enabled autonomous systems through real-time sensing and learning.

*Deadline: Proposals accepted ANYTIME*

## RECENTLY AWARDED GRANTS

- Adam Curtis Gladen (Principal Investigator). RII Track-2 FEC: Sustainable Engineering Infrastructures and Solutions for Tribal Energy Sovereignty. \$280,000 from the National Science Foundation. 8/15/2023 - 7/31/2025.

## RECENTLY SUBMITTED PROPOSALS

- Ying Huang (Principal Investigator), Zhongyu Yang (Co-PI). REU Site: Smart and Advanced Coatings for Harsh Environments (SACHE). \$465,000 from the National Science Foundation. 6/3/2024 - 6/2/2027.
- Zhibin Lin (Principal Investigator). BRITE Pivot: Possible impossibility and impossible possibility: Unraveling secrets of high-risk rare events for the safety of civil infrastructures via AI, system theory, and nonlinear causality. \$590,799 from the National Science Foundation. 8/16/2024 - 8/15/2027.
- Long Jiang (Principal Investigator), Zhibin Lin (Co-PI), Xiaoyu Feng (Co-PI). Novel Biobased Energy-Harvesting Insulation Materials via Low-Carbon Biofabrication. \$650,000 from the National Institute of Food & Agriculture. 7/1/2024 - 6/30/2027.
- Clairmont Clementson (Principal Investigator). Modeling of Heat-Induced Quality Variations of Corn: An Intra-Study of Corn Varieties Under High Temperature Drying. \$482,231 from the National Institute of Food & Agriculture. 7/1/2024 - 6/30/2027.
- Clairmont Clementson (Principal Investigator). Expanding students' understanding of how to measure moisture content using official air oven method and determining test weights. \$1,132 from the ND Grain Dealers Educational Foundation. 10/1/2023 - 9/30/2024.
- Jeremy A Straub (Principal Investigator). DARPA AI Challenge Sub-Award Proposal. \$399,910 from the Department of Defense. 11/1/2023 - 10/31/2024.
- Danling Wang (Principal Investigator), Qifeng Zhang (Co-PI), Shuvashis Dey (Co-PI), Zhibin Lin (Co-PI), Qi Zhang (Co-PI). High-performance 3D printed flexible sensors for on-field precision agriculture. \$650,000 from the National Institute of Food & Agriculture. 2/1/2024 - 1/31/2027.
- Zhulu Lin (Co-PI). PARTNERSHIP: U.S. Soybean and Corn Supply Chain Resilience: Impacts of Extreme Droughts on Production, Shipping, Trade, and Global Food Security. \$800,000 from the National Institute of Food & Agriculture. 5/15/2024 - 5/14/2028.
- Ewumbua Monono (Co-PI). Flash Detente Prototype. \$63,014 from the ND Department of Agriculture. 12/1/2023 - 11/30/2024.
- Leon George Schumacher (Co-PI). PARTNERSHIP: SheePLF - Evaluating climate-smart technologies for sustainable sheep farming and workforce enhancement. \$1,150,000 from the National Institute of Food & Agriculture. 5/1/2024 - 4/30/2029.

## RECENT PUBLICATIONS

*For 2023, 198 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:*

- Bozorg-Haddad, Omid, Mohammad Delpasand, Sarvin ZamanZad-Ghavidel, and Xuefeng Chu. 2023. "Developing a Novel Social-Water Capital Index by Gene Expression Programming." *ENVIRONMENT DEVELOPMENT AND SUSTAINABILITY*, September, s10668-023-03807-8. <https://doi.org/10.1007/s10668-023-03807-8>.
- Choudhary, Mahipal, Siba Prasad Datta, Debasis Golui, Mahesh Chand Meena, Mahaveer Nogiya, Saubhagya Kumar Samal, Mohammed Basit Raza, Mohammad Mahmudur Rahman, and Rahul Mishra. 2023. "Effect of Sludge Amelioration on Yield, Accumulation and Translocation of Heavy Metals in Soybean Grown in Acid and Alkaline Soils." *ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH*, August. <https://doi.org/10.1007/s11356-023-29568-5>.
- Qi, Tiansong, Mosammat Mustari Khanaum, Kyle Boutin, Marinus L. Otte, Zhulu Lin, and Xuefeng Chu. 2023. "Incorporating Wetland Delineation and Impacts in Watershed-Scale Hydrologic Modeling." *WATER* 15 (14): 2518. <https://doi.org/10.3390/w15142518>.
- Saha, Prattasha, and Mijia Yang. 2023. "A Neural Network Approach to Estimate the Frequency of a Cantilever Beam with Random Multiple Damages." *SENSORS* 23 (18): 7867. <https://doi.org/10.3390/s23187867>.
- Zhang, Dawei, Ying Huang, Wenjie Xia, Luyang Xu, and Xingyu Wang. 2023. "Dispersion Characteristics and Mechanical Properties of Epoxy Nanocomposites Reinforced with Carboxymethyl Cellulose Functionalized

Nanodiamond, Carbon Nanotube, and Graphene.” *POLYMER COMPOSITES*, September.  
<https://doi.org/10.1002/pc.27785>.

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.

