

COLLEGE HAPPENINGS

August 23, 2022

FROM THE DEAN

New Beginnings

Welcome to the first full day of classes for 2022-23. There is exciting energy and vitality on campus as we begin anew the academic year. I hope you were able to take some time over the summer to refresh and re-energize before the start of the Fall semester. It is certainly nice to be starting classes without any restrictions on our campus and delightful to have a return to normalcy after the past two years.

Yesterday, we celebrated the new cohort of first-year students to campus, the class of 2026, at the College of Engineering's new student welcome event in the Bentson-Bunker Fieldhouse. Our Engineering Ambassadors gave the new students a short piece of advice about thriving on campus. And I reassured the students that they made a great choice coming to NDSU and choosing to study in the College of Engineering, with our knowledgeable faculty to learn from and our helpful staff throughout the college.

Official enrollment data won't be available for a few more weeks. Still, early estimates indicate that we look to be down about 19 students compared to last year for new freshmen in the College of Engineering but should be up about 46 in new transfer students. With the large graduating class last year, we expect the overall numbers for the college to be slightly down.

With David Cook starting as the new president at NDSU this year, we are also experiencing a new beginning in university leadership. I hope you will attend the meeting for all College of Engineering faculty and staff with President Cook next Thursday, September 1, from 9:00-10:30 in the Anishinaabe Theatre in the Memorial Union. It will be an opportunity to hear directly from President Cook about his priorities for NDSU. I expect there will be ample opportunity for Q&A, so consider questions you'd like to raise in the meeting.

I hope you all have a fantastic start to the new school year.



IN THE NEWS

[NDSU robotics team excels in competition](#)

[NDSU professor brings book tour experiences to classroom](#)

[Assistant professor joins ABEN department](#)

[Challey Institute names 2022-2023 Faculty Fellows](#)

[North Dakota Water Resources Research Institute director named](#)

CONGRATULATIONS

Xinhua Jia, professor of agricultural and biosystems engineering, was recently named director of the **North Dakota Water Resources Research Institute**.

Chau Le, assistant professor of civil, construction, and environmental engineering, and **Jeremy Straub**, assistant professor of computer science, have been named 2022-2023 **Faculty Fellows of the Sheila and Robert Challey Institute for Global Innovation and Growth** at NDSU.

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

Thursday, September 1, **College of Engineering meeting with NDSU President David Cook**. 9:00 – 10:30 a.m. at the Anishinaabe Theater in the NDSU Memorial Union.

Thursday, October 13, **College of Engineering Scholarship and Awards Reception**. 3:00 p.m. in the NDSU Memorial Union.

IT UPDATES

Upcoming Professional Development Opportunities for Instructors

[View the monthly calendar](#) for the full list of learning opportunities with the Learning and Applied Innovation Center (LAIC), including a four-session Course Design & Development Series.

Course Software Updates from the LAIC

Many software vendors have provided updates over the summer, so if you use any of these for your course, please visit the [LAIC Updates](#) page for details.

- Update YuJa Software Capture Application
- Check your Zoom desktop client for updates
- Install/activate new Respondus 4.0 License
- TurningTechnologies merged with Echo360, and the Turning Product Login is called Points Solutions.
- New consolidated Blackboard App

Remote Desktop Access Ended

Remote Desktop access to computer lab machines and the software on them has ended as of June 30, 2022. This service was a short-term solution early in the pandemic to providing software to students. IT does still have the Virtual Open Lab, which allows students to access software remotely. Instructions on using this service is at: <https://kb.ndsu.edu/114270>.

RESEARCH LEADERSHIP PILOT PROGRAM

The Research and Creative Activity office is piloting a professional development program for up to twelve (12) mid-career faculty interested in leading multidisciplinary research programs. The program will include an 8-session research leadership course led by the [AtKisson Training Group](#) (ATG), which begins October 3, 2022.

Applications and/or nominations are due Friday, August 26, 2022. [Learn more >>](#)

FUNDING OPPORTUNITIES

NDSU RCA Funding Opportunities

Research Development Travel and Conference Support Awards help defray expenses for faculty presenting at national conferences (virtual or on-site) or for supporting travel to visit archives or special collections. As this pool of funding is limited, please consider allowing individuals who do not have other sources of travel funding to apply for this opportunity.

Research Support Services Awards help defray the costs of support services required for research, creative, or scholarly activity. For example, funds may be used in one of the NDSU Core Facilities, another recharge / service center, or for transcription services.

Research Development Funding Agency Visit Travel Awards help defray expenses for faculty traveling to meeting with Program Officers / Program Directors at funding agencies. This program requires a 1:1 match from the applicant's department and / or college.

More information and application instructions are posted on the [RCA website](#).

NSF: Civil Infrastructure Systems

The Civil Infrastructure Systems (CIS) program [[PD 19-1631](#)] supports fundamental and innovative research in the design, operation and management of civil infrastructure that contributes to creating smart, sustainable and resilient communities at local, national and international scales. This program focuses on civil infrastructure as a system in which interactions between spatially- and functionally- distributed components and intersystem connections exist. All critical civil infrastructure systems are of interest, including transportation, power, water, pipelines and others.

The CIS program encourages potentially disruptive ideas that will open new frontiers and significantly broaden and transform relevant research communities. The program particularly welcomes research that addresses novel system and service design, system integration, big data analytics, and socio-technological-infrastructure connections. The program values diverse theoretical, scientific, mathematical, or computational contributions from a broad set of disciplines.

While component-level, subject-matter knowledge may be crucial in many research efforts, the program does not support research with a primary contribution pertaining to individual infrastructure components such as materials, sensor technology, extreme event analysis, human factors, climate modeling, structural, geotechnical, hydrologic or environmental engineering.

Proposals accepted anytime.

RECENTLY FUNDED GRANTS

- John F Nowatzki (CPI), Xin Sun (CPI). Advanced UAS/UAV Application and Data Management Systems and Bioinformatics Tools Integrate GxExM Data for Precision Agricultural Management. \$5,196,553 from the Agricultural Research Service. 9/1/2018 - 8/31/2023.
- Majura Fortunatus Selekwa (PI). Functional Coatings for Vehicle Autonomy Phase III: Development of a Robotic Vehicle for Testing PPG Coatings. \$203,899 from the Office of the Secretary of Defense. 2/14/2022 - 9/25/2023.
- Long Jiang (PI). Development of soymeal-based baling twine with high digestibility. \$47,962 from the ND Soybean Council. 7/1/2022 - 6/30/2023.
- Xuefeng Chu (PI). 2022-2023 NDWRRRI Graduate Fellowship Matching Funds. \$25,000 from the ND Water Commission. 9/1/2022 - 8/31/2023.

RECENTLY SUBMITTED PROPOSALS

- Changhui Yan (PI). An Intelligent System to Reduce Environmental Footprint of Corrosion Maintenance. \$298,415 from the U.S. Army. 9/1/2022 - 8/31/2024.
- Syeed Md Iskander (PI), Jiale Xu (CPI). Purchasing of a liquid chromatography/quadrupole time of flight mass spectrometry (LC/Q-TOF MS) system for the newly established Environmental Engineering program at North Dakota State University. \$75,000 from the NDSU Foundation & Alumni Association. 12/1/2022 - 7/1/2024.
- Mijia Yang (PI), Ying Huang (CPI). Center for durability of ag-energy infrastructure under extreme temperatures. \$858,203 from the Department of Transportation. 1/1/2023 - 12/31/2023.
- Wenjie Xia (PI). Materials-by-Design for High-Performance Bridge Coatings on Non-Ideal Surfaces. \$300,000 from the U.S. Army. 12/1/2022 - 11/30/2024.
- Omid Beik (PI). Regenerative Grid Simulator (RGS): An Equipment for Establishing A Power Engineering Teaching Laboratory. \$75,000 from the NDSU Foundation & Alumni Association. 10/20/2022 - 10/19/2023.
- Shuvashis Dey (PI). Enabling the Fabrication of Embroidery Based Wearable Textile Antenna and Sensors for Wireless Body Area Network (WBAN) and Internet of Everything (IoE). \$45,000 from the NDSU Foundation & Alumni Association. 11/1/2022 - 10/31/2024.
- Qifeng Zhang (PI), Adam Curtis Gladen (CPI). Development of Technologies to Facilitate Fast Charging. \$274,283.64 from the U.S. Army. 10/1/2022 - 9/30/2024.
- Inbae Jeong (PI), Youjin Jang (CPI). Improving robotics & automation education through miniaturized real-world applications \$60,000 from the NDSU Foundation & Alumni Association. 11/1/2022 - 10/31/2024.
- Fardad Azarmi (PI). Demonstration of Dynamic Adhesion Strength for Maintenance and Sustainment Environments. \$896,405 from the U.S. Army. 11/1/2022 - 10/31/2024.
- Igathinathane Cannayen (PI). Developing Remote Sensing and Image Processing Tools for North Dakota Agricultural and Rangeland Applications. \$118,994 from the Agricultural Research Service. 9/1/2022 - 8/31/2027.
- Clairmont Clementson (PI). Assessing corn grain breakage susceptibility in the Northern Plains Region. \$24,690 from the Cereals and Grains Association. 10/1/2022 - 9/30/2023.

RECENT PUBLICATIONS

For 2022, 86 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:

- Mathure, Nimish, Sudarshan K. Srinivasan, and Kushal K. Ponugoti. 2022. "A Refinement-Based Approach to Spectre Invulnerability Verification." *IEEE Access* 10: 80949–57. <https://doi.org/10.1109/ACCESS.2022.3195508>.
- Rony, Rajib Uddin, Adam C. Gladen, and Jeremy Kientz. 2022. "Experimental Investigation of a Prototype Thermal Refuge for Trout." *Energies* 15 (15): 5648. <https://doi.org/10.3390/en15155648>.
- Rony, Rajib Uddin, Adam C. Gladen, Sarah LaVallie, and Jeremy Kientz. 2022. "Design and Evaluation of Lab-Scale, Heat Exchanger Prototypes to Provide Thermal Refugia for Trout." *Journal of Energy Resources Technology-Transactions of the ASME* 144 (7): 070913. <https://doi.org/10.1115/1.4053867>.
- Straub, Jeremy. 2021. "Gradient Descent Training Expert System." *Software Impacts* 10 (November): 100121. <https://doi.org/10.1016/j.simpa.2021.100121>.
- Zhang, Dawei, Ying Huang, and Leonard Chia. 2022. "Effects of Carbon Nanotube (CNT) Geometries on the Dispersion Characterizations and Adhesion Properties of CNT Reinforced Epoxy Composites." *Composite Structures* 296 (September): 115942. <https://doi.org/10.1016/j.compstruct.2022.115942>.

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*.

Follow the College of Engineering on social media.

