NDSU | COLLEGE OF ENGINEERING

COLLEGE HAPPENINGS

April 2, 2024

FROM THE INTERIM DEAN

The End of an Era

Over the next few weeks, we will begin to see changes around the engineering complex in preparation for the construction of the new Offerdahl facility. The process will start this summer with the demolition of the Engineering Administration Building, probably better known as the “round building” or the “Oreo” or the “spaceship,” among other names. Whether you admire the unique architectural style or disapprove of the inefficient use of space, this building evokes strong memories among our alumni and is one of the most iconic buildings on campus. It was completed in 1965 and linked to the other engineering buildings by uncovered skywalks (the original plans called for covered skywalks to connect all the buildings together, but a lack of funding altered those plans). The Engineering Administration Building has served our college well for nearly 60 years, but it is time to make way for a new facility that will better meet the future needs of our educational and research programs.

The staff in the Dean’s office have already begun preparing for the transition, packing up our belongings to vacate the building. For the next two years, our new home will be located across the street in E. Morrow Lebedeff Hall, EML 255. This office suite was formerly the home of the Dean’s office for the College of Human Sciences and Education, prior to the merger with the College of Health Professions. We are grateful to our colleagues in the new College of Health and Human Sciences for vacating this space for our use while the new facility is built. By mid-April, Scott Pryor, Kyle Bosch, Nancy Rossland, Angela Gross, and myself will have moved into the new space in EML. Joel Hanson, our Lead Academic Advisor, has already moved into his new office in ENGR 228, and Alissa Kuntz, our College Business Manager, will be moving into CIE 201I to remain in closer proximity to the other COE Business Center staff. We invite all of you to come and visit us in our new (but temporary) locations!

Once the round building has been fully vacated, asbestos abatement will begin, currently planned for early May. The building and skywalks will be demolished in early summer, with site work and staging for the new construction to begin in late summer. Obviously, this will cause some disruptions and inconveniences during the next academic year, but our contractor will be working closely with Facilities Management to minimize the impacts to our students, faculty, and staff. As the construction plans and timeline become firmed up over the summer, we will be communicating more details to assist you in planning for the upcoming year. I appreciate your patience and understanding during this challenging time…but I am confident that the long-term benefits provided by the new facility will far outweigh the short-term sacrifices we will experience over the next two years!

Alan R. Kallmeyer, Ph.D.
Interim Dean | College of Engineering

IN THE NEWS

Environmental engineering professor awarded Faculty Lectureship

Battle of the Cents-es to benefit stepson of NDSU senior lecturer

Registration open for 2024 STEM Camps

Recent NDSU graduates find successful careers

CONGRATULATIONS

Canan Bilen-Green, professor of industrial and manufacturing engineering, has been selected as the recipient of the C**hamber of Commerce NDSU Distinguished Faculty Service Award** for the 2023-24 academic year.

Syeed Iskander, assistant professor of civil, construction and environmental engineering, has been selected as one of three NDSU recipients of the **Peltier Innovation in Teaching Award** for the 2023-24 academic year.

Pooyan Vahidi Pashaki, a graduate student in the Biomedical Engineering Program, has been awarded a nationally and internationally competitive scholarship by the **Society of Standardization Professionals**. The selection is very competitive, and only one or two students are chosen annually.

The **NDSU Clean Snowmobile team** earned 2nd place overall at the **2024 Clean Snowmobile Challenge**. During the competition the team earned 1st place for their design paper and presentation, 1st place for in-service emissions, and 1st place in objective handling.

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, April 4, **63rd Faculty Lectureship**. "From Rainfall to Snowfall: Nanotech Innovations for Shared Sustainability," by Dr. Achintya Bezbaruah, Gehrts Presidential Professor and interim chair of Civil, Construction and Environmental Engineering, on Thursday, April 4, 3:00 pm, in the Memorial Union Anishinaabe Theatre.

Wednesday, April 17, **Open Forum on Shared Governance**. 2:00 - 3:00 p.m. in the A. Glenn Hill Center, room 130/132. Watch your email for more information on the open forum logistics and format.

Thursday, May 2, **Spring Senior Design Expo**. The Spring Senior Design Expo will showcase capstone projects from all departments in the College of Engineering and give you the chance to interact with our amazing students and learn more about their work. 12 – 3 p.m. in the NDSU Oceti Sakowin Ballroom.

Friday, May 10, **Spring Ring and Pin Ceremony**. The biannual Ring and Pin Ceremony is a blending of two significant and celebratory events, the **Order of the Engineer** and the **Pledge of the Computing Professional**.

Saturday, May 11, **Spring Commencement**. 2:00 p.m. at the Fargodome. Faculty and staff who wish to participate in the academic processional along with our graduation class will wear caps and gowns. Register to participate.

STUDENT RESEARCH DAYS

NDSU Student Research Days is a two-day event dedicated to providing NDSU graduate and undergraduate students an opportunity to present their research and creative works. Scheduled for April 9-10, 2024, Student Research Days is a collaboration among NDSU EXPLORE, Gamma Sigma Delta, and the Graduate Student Council.

- The NDSU Office of Research and Creative Activity hosts NDSU EXPLORE, an annual showcase in which undergraduate students in all disciplines present their research and creative projects.
- Gamma Sigma Delta is an agricultural honor society that encourages and rewards excellence in agriculture, and the NDSU chapter hosts an annual symposium during which undergraduate and graduate students present their research.
- The NDSU Graduate Student Council hosts an annual research symposium in which graduate students in all disciplines present their research.

Schedule

Tuesday, April 9, 2024:

- Undergraduate student poster session and oral presentations.

Wednesday, April 10, 2024:

- Graduate student poster session and oral presentations.

NDSU UAS NETWORK

Inspired by robots, drones, autonomous systems and artificial intelligence for your research? Your talent is needed! Join the NDSU UAS Network, where cutting-edge technology meets collaborative excellence.

The NDSU UAS Network is a collaborative community organized by NDSU Associate Professor and RCA UAS Faculty Fellow Rex Sun. Its goal is to gather individuals who are interested in uncrewed autonomous systems (UAS), artificial intelligence (AI), and cutting-edge technology to enrich innovation, research, and interdisciplinary collaboration. Learn more and register.

STAFF RECOGNITION AWARD NOMINATONS

The NDSU Staff Senate, in partnership with the Office of Human Resources, invites you to recognize current broadbanded staff members for hard work and ingenuity in making NDSU a better place. The awards are given to acknowledge outstanding achievement on the job; exceptional contributions toward effectiveness and efficiency of operations; outstanding service to other employees, students, or visitors; and distinguished efforts in staff development.

Staff eligible for nomination are those who serve within the five broadbanded categories at NDSU: Administrative/Professional, Technical/Paraprofessional, Office Support, Crafts/Trades, and Services. Nominations will be accepted in two categories: Individual Awards and Team Awards.

Award recipients will be announced at the Staff Recognition Social on April 18th from 1– 2:30pm in the Memorial Union Ballroom.

The deadline for nominations is March 22, 2024. For more information and to complete the online nomination form please go to: https://www.ndsu.edu/staff_senate/recognition/staff_recognition_award/.

FUNDING OPPORTUNITIES

Air Force Fiscal Year 2025 Young Investigator Program
The Fiscal Year 2025 Air Force Young Investigator Research Program (YIP) intends to support individual early in career scientists and engineers who have received Ph.D. or equivalent degrees by 01 April 2017 or later showing exceptional ability and promise for conducting basic research. The program objective is to foster creative basic research in science and engineering; enhance early career development of outstanding young investigators; and increase opportunities for the young investigator to recognize the Air Force and Space Force mission and related challenges in science and engineering.

Individual awards are made to U.S. institutions of higher education, industrial laboratories, for- profit, or non-profit research organizations where the principal investigator (PI) is employed on a full-time basis and holds a regular, non-contractor position. A YIP PI must be a U.S. citizen, national, or permanent resident. Researchers working at a Federally Funded Research and Development Center, or a Department of Defense (DoD) Laboratory are not eligible for this competition.

Deadline: June 21, 2024 | *Learn more and apply >>*

DOE: Reaching a New Energy Sciences Workforce
Reaching a New Energy Sciences Workforce (RENEW) aims to build foundations for Office of Science (SC) research through traineeships at academic institutions that have been historically underrepresented in the SC portfolio. RENEW leverages SC's unique national laboratories, user facilities, and other research infrastructure to provide training opportunities for students and postdoctoral researchers from these institutions. The hands-on experiences gained through RENEW will open new career avenues for trainees, forming a nucleus for a future pool of talented young scientists, engineers, and technicians with the critical skills and expertise needed for the full breadth of SC research activities.

Deadline: July 23, 2024 | *Learn more and apply>>*

RECENTLY AWARDED GRANTS

- Pan Lu (Principal Investigator), Ying Huang (Co-PI), Denver D Tolliver (Co-PI). Expanding Summer Youth Programs in Rail though Virtual Learning and a National Campus Network. $19,500 from the Federal Railroad Administration. 8/1/2023 - 7/31/2024.
- Qifeng Zhang (Principal Investigator), Adam Curtis Gladen (Co-PI). Development of Technologies to Facilitate Fast Charging. $274,283 from the U.S. Army. 10/1/2023 - 11/10/2024.

RECENTLY SUBMITTED PROPOSALS

- Jiale Xu (Principal Investigator), Kalpana Katti (Co-PI), Dinesh R Katti (Co-PI). Assessing the risk of PFAS in transporting through landfill liners using permeameter and computational models. $249,996 from the Department of Defense. 6/1/2025 - 1/31/2028.
- Youjin Jang (Principal Investigator), Inbae Jeong (Co-PI). Active Shooter Preparedness for Safe NDSU Campus. $5,000 from the NDSU Foundation. 5/1/2024 - 8/31/2025.
- Xin Sun (Principal Investigator). NDSU Uncrewed Autonomous Systems (UAS) Student Scholarship. $5,000 from the NDSU Foundation. 7/1/2024 - 6/30/2025.
- Xiaoyu Feng (Principal Investigator). Performance Evaluation of a Robust Chip-based RF sensor for Soil Moisture Determination. $4,183 from the NDSU Foundation. 7/1/2024 - 6/30/2025.
- Xiaoyu Feng (Principal Investigator). Effect of biofertilizer produced from Vermicompost food waste on crop yield: A greenhouse scale trial. $3,570 from the NDSU Foundation. 7/1/2024 - 6/30/2025.
- Xiaoyu Feng (Principal Investigator). Green energy generation from wastewater through microbial fuel cell (MFC): Using biomaterial as electrodes. $1,969 from the NDSU Foundation. 7/1/2024 - 6/30/2025.
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- Mijia Yang (Principal Investigator). Realtime visibility messaging through the camera installed on vehicles. $5,000 from the NDSU Foundation. 6/1/2024 - 12/31/2025.
- Minwei Xu (Principal Investigator), Changhui Yan (Co-PI). Pulse Consistency: Elevating Seed Quality with Advanced Sorting Technologies. $173,815 from the Agricultural Research Service. 8/1/2024 - 7/31/2026.
- Umamaheswara Rao Tida (Principal Investigator). FMSG:BIO: Disposable Microfluidics Device with Integrated RF Electric Fields and Machine Learning for Biomanufacturing of mRNA-based CAR T-cells. $159,807 from the National Science Foundation. 8/16/2024 - 8/15/2026.
- Shuvashis Dey (Principal Investigator). Towards an Inexpensive, Ubiquitous Wireless Soil Salinity and Nutrient Sensing System for Precision Agriculture. $19,800 from the NDSU Foundation. 6/1/2024 - 11/30/2025.
- Shuvashis Dey (Principal Investigator). Microwave Rectenna and Cellulose Nano Fiber (CNF) Thin Film Based Wireless Drug Delivery System for Therapeutic Treatment. $5,000 from the NDSU Foundation. 6/1/2024 - 11/30/2025.
- Jiale Xu (Principal Investigator). Crop waste-based materials for remediation of brine spills from the oil and gas industry. $17,888 from the NDSU Foundation. 6/1/2024 - 5/31/2025.
- Jiale Xu (Principal Investigator). Disinfection of Antimicrobial Resistance Genes by Innovative Krypton Chloride Excimer Lamps. $4,988 from the NDSU Foundation. 6/1/2024 - 5/31/2025.
- Jiale Xu (Principal Investigator). Removal of Herbicide Carryover by Safeners under Sunlight Irradiation. $4,900 from the NDSU Foundation. 6/1/2024 - 5/31/2025.
- Syeed Md Iskander (Principal Investigator). PFAS Contamination in Fargo's Agricultural Lands. $18,000 from the NDSU Foundation. 10/1/2024 - 9/30/2025.
- Syeed Md Iskander (Principal Investigator). PFAS fate in Fargo yard waste compost. $5,000 from the NDSU Foundation. 9/1/2024 - 8/31/2025.
- Syeed Md Iskander (Principal Investigator). PFAS in agricultural runoff. $5,000 from the NDSU Foundation. 9/1/2024 - 8/31/2025.
- Syeed Md Iskander (Principal Investigator). PFAS in landfill leachate. $1,000 from the NDSU Foundation. 9/1/2024 - 8/31/2025.
- Xinnan Wang (Principal Investigator). Developing a laser-based machine vision system for macroscale measurement. $5,000 from the NDSU Foundation. 7/1/2024 - 6/30/2025.
- Xiangfa Wu (Principal Investigator). Biomass electrolysis for low-cost, green production of hydrogen and value-added chemicals. $5,000 from the NDSU Foundation. 6/1/2024 - 10/31/2025.
- Zhulu Lin (Principal Investigator), Rob Proulx (Co-PI). North Dakota Statewide Irrigation Feasiblity Study. $66,100 from the ND Irrigation Association. 4/1/2024 - 12/31/2024.

RECENT PUBLICATIONS

For 2024, 40 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:

- Bhushan, Shashi, U. Jayakrishnan, Nathaniel Johnson, Sanjeev K. Prajapati, Kohilamulle A. S. Lakshan, Kishor Kaphle, Sulaymon Eshkabilov, and Halis Simsek. 2024. “UV-C Pretreatment of Wastewater-Grown Algal Biomass for Recover of Biofuel Precursors.” *JOURNAL OF ENVIRONMENTAL CHEMICAL ENGINEERING* 12 (2): 112087. https://doi.org/10.1016/j.jece.2024.112087.
- Kundu, Krishna, Hanmant K. Gaikwad, Sharad V. Jaswandkar, Preetham Ravi, Parth Vyas, Mark R. Hoffmann, Deniz Cakir, Dinesh R. Katti, and Kalpana S. Katti. 2024. “Biomechanically Tunable Scaffolds for Bone Tissue Regeneration and Testbeds of Cancer Bone Metastasis.” *MATERIALIA* 33 (March): 102024. https://doi.org/10.1016/j.mtla.2024.102024.
- Quader, Raihan, Lokesh Karthik Narayanan, and Eugene B. Caldona. 2024. “Dielectric Characterization of Fiber- and Nanofiller-Reinforced Polymeric Materials.” *JOURNAL OF APPLIED POLYMER SCIENCE*, February. https://doi.org/10.1002/app.55362.

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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