

COLLEGE HAPPENINGS

March 5, 2024

FROM THE INTERIM DEAN

Graduate Waivers and Tuition Remission

With the implementation of a new budget model this year, we have had to make changes to our graduate tuition waiver policies. Tuition waivers are now directly expensed to each college, and must be balanced against our revenues generated from tuition income. This adjustment has required a thoughtful evaluation of our policies for granting tuition waivers for graduate students, while recognizing the importance of these waivers on our ability to recruit and retain high-quality graduate students. In developing the new policies, we have strived to strike a reasonable balance that will allow us to remain competitive in recruiting students, while still maintaining fiscal responsibility in balancing our budget. I believe the new policies, developed in consultation with our department chairs and in accordance with the guidelines established by the Graduate School, meet these goals. You can see the new policies [here](#).

In conjunction with the new tuition waiver policies, we have also implemented new requirements for including graduate tuition remission in grant proposals. This is a common practice at many research universities, as most federal agencies allow tuition remission to be included as a direct cost in grants. As with the tuition waiver policies, we have strived to develop guidelines that will not create an undue burden on our research or graduate programs. Specifically, tuition remission will only be required in larger grants that can sustain these costs without causing a negative impact on research productivity. The new policies for tuition remission in grant proposals can be found [here](#).

As we implement these new policies, I recognize that exceptions will need to be made in certain cases to accommodate students during this period of transition. Please don't hesitate to reach out to me if you have questions or would like to discuss alternative arrangements. I welcome your feedback and suggestions!

Alan R. Kallmeyer, Ph.D.

Interim Dean | College of Engineering

IN THE NEWS

[Solar fence stops snow and generates electricity](#)

[MNDOT harnessing solar energy to create dual-purpose snow fences](#)

[NDSU introduces girls to engineering](#)

['Change lives through engineering'](#)

[More than 150 local middle school girls get chance to explore world of engineering at NDSU](#)

[NDSU to host 'Girls in Engineering' event](#)

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

Thursday, March 14, **Celebration of Grant Lebahn**. The Department of Civil, Construction and Environmental Engineering is hosting a special event celebrating the outstanding contributions of Grant Lebahn to NDSU and the College of Engineering. 5 – 6 p.m. in the MU Anishinaabe Theater.

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.

STEM KIDS CAMP INSTRUCTORS AND ASSISTANTS NEEDED

NDSU's College of Engineering is looking for instructors to lead sessions for STEM Kids Camp 2024! We also need classroom assistants to help instructors facilitate lessons by distributing supplies and interacting with the students.

The camp will be held 2 separate weeks on the NDSU campus from **July 15 – 18** and again **July 22 – 25**. In both positions, we are looking for strong leaders who have a passion for STEM and enjoy sharing it with K-8 students. Below is more information about the camp:

- Camps run Monday – Thursday each week.
- There are 2 sessions per day each week. The morning session is from 9am – 12pm. Afternoon session is from 1pm – 4pm. pm. hers will be with the same group of students for the entire session.
- Sessions are grouped by grades with maximum of 20 students:
- You can teach up to 4 sessions. You can teach the same topic each session or each session can be different.
- You can use our curriculum or design your own. Curriculum for the week-long camp session needs to be designed to fill 12 contact hours with the students. We will work with you to get your session planned out and ready to present, including all supplies.
- You get paid!

Please contact Angela Gross (angela.gross@ndsu.edu) by Tuesday, March 12, 2024, if you are interested in this summer opportunity.

STAFF SENATE NOMINATIONS

NDSU Staff Senate is currently seeking nominations for Senators for the 2024-2026 term. All Senators serve a two-year term, which starts in May of each year.

There are many opportunities to get involved with Staff Senate including participating in policy approval and providing feedback to Administration. The group meets once a month to discuss issues relevant to staff and there are a variety of committees on which Senators can serve.

All staff members are eligible to be nominated for Staff Senate if they meet the following criteria:

1. Be a broad banded employee and have a job in one of the following job bands: 1000/3000, 4000, 5000, or 6000/7000.
2. Have completed the probationary period.

[NOMINATE YOURSELF \(OR ANOTHER STAFF MEMBER\) FOR STAFF SENATE](#)

STAFF SENATE SCHOLARSHIP

The application window for the Staff Senate Scholarships is currently open! Applications will be accepted through **March 15, 2024**. Detailed scholarship information is below, as well as on the [Staff Senate webpage](#).

The NDSU Staff Senate offers scholarships to eligible NDSU broadbanded staff and to dependents of broadbanded staff. Eligibility requirements are as follows:

[Broadbanded Staff Scholarship](#), \$100 maximum

THE APPLICANT MUST:

- Be properly enrolled with at least three (3) graduate or undergraduate credits at North Dakota State University at the time of disbursement (Fall 2024).
- Be a benefited, broadbanded staff member who has been employed by North Dakota State University for a minimum of one year by January 1, 2024.
- Have earned a cumulative GPA of 2.5 or above (including transfer credit).
- *Preference given to applicants who have completed at least 15 semester credits.*
- *Preference given to degree seeking undergraduate or graduate students.*

[Broadbanded Staff Scholarship Application Form](#)

[Dependents of Broadbanded Staff Scholarship](#), \$500 maximum

THE APPLICANT MUST:

- Be properly enrolled at least half-time at North Dakota State University at the time of application and at the time of disbursement (Fall 2024).
- Be a dependent of a benefited, broadbanded staff member who has been employed by NDSU for a minimum of one year by January 1, 2024.
- Have completed fifteen semester credits with a 2.5 cumulative GPA or above (including transfer credit).
- Be enrolled as an undergraduate student.

[Dependent of Broadbanded Staff Application Form](#)

The Staff Senate Scholarship Committee will select the recipients prior to the Fall 2024 semester. Disbursement of scholarship funds will occur at the beginning of the Fall 2024 semester.

WATER RESOURCES RESEARCH INSTITUTE FELLOWSHIP PROGRAM

All NDSU and UND graduate students studying in water resources areas are invited to apply for the 2024 NDWRRI Fellowship Program. Applicants must be a current NDSU or UND graduate student conducting thesis/dissertation research in water resources areas. Recipients of a 2023 NDWRRI fellowship may apply for continuous funding in 2024.

Applications must be submitted electronically to Xinhua.Jia@ndsu.edu by 5:00 PM on April 5, 2024. [Learn more and apply >>](#)

FUNDING OPPORTUNITIES

NDSU Foundation Grants

The NDSU Foundation Grants Committee is now accepting applications from NDSU faculty and staff for five grant opportunities for the Spring 2024 Grant Program. By providing funding for these grants through philanthropy,

benefactors help enhance the NDSU experience by supporting faculty and staff innovation. Faculty and staff can obtain application forms and additional information for the available grants at the NDSU Foundation website:

<https://www.ndsufoundation.com/grant-applications>.

The deadline to submit your application is March 21, 2024, by 4:30 p.m.

- *The Board of Trustees Endowment* can provide maximum awards of \$1,000, with a total of \$6,300 available. This grant fund supports general programs across campus.
- *The Centennial Endowment* can provide maximum awards of \$5,000, with a total of \$25,600 available. This grant fund supports professorships, scholarships, biotechnology, faculty development, libraries, and cultural arts.
- *The Gordon A. Larson Foundation Fund* has \$19,800 available to award. This grant fund supports competitive grants for agricultural research efforts conducted at North Dakota State University.
- *The Library Endowment* has \$6,000 available to award. This grant fund supports requests from any academic unit on campus for materials that will enhance the collections and/or operations of university libraries.
- *The Carl A. and Jean Y. White Memorial Endowment for Agriculture Research* has \$4,900 available to award. This grant fund supports faculty and research staff to encourage agricultural research initiatives.

Questions? Please email Janna Swanson at janna.swanson@ndsufoundation.com. The NDSU Foundation will notify applicants of funding decisions by May 20, 2024.

Pilot Grants: NASA EPSCoR

NASA Established Program to Stimulate Competitive Research (EPSCoR) establishes partnerships with government, higher education and industry that are designed to effect lasting improvements in a state or region's research infrastructure, research and development capacity, and its national research and development competitiveness. NASA's overall mission is: Exploring the secrets of the universe for the benefit of all. NASA investigates the unknown in air and space, innovates for the benefit of humanity, and inspires the world through discovery. NASA currently has 80 active science missions, see [here](#) for more information and [here](#) for perspectives from past NASA-funded researchers.

Each proposed NASA EPSCoR pilot project shall perform scientific and/or technical research in areas that support NASA's strategic research and technology development priorities with the goal of ensuring a competitive submission to a NASA funding opportunity. All proposals should emphasize and clearly articulate how the pilot project develops capabilities to compete for funds from NASA.

Proposals for this fiscal year can be up to \$50,000 in direct costs only, no indirect costs will be allowed. Faculty who may be seeking matching funds for a NASA proposal should contact heidi.grunwald.1@ndsu.edu prior to submitting. [Learn more and apply >>](#)

RECENTLY AWARDED GRANTS

- Chad A Ulven (Principal Investigator), Benjamin Davis Braaten (Co-PI), Ali Amiri (Co-PI). Thermoplastic Composites for Expedient Protective Systems and Deployable Force Protection Applications. \$993,427 from the U.S. Army. 8/1/2023 - 11/30/2027.
- Ghodrat Karami (Principal Investigator). NDSU NASA Rover Challenge- A Senior Design Project. \$12,000 from the University of North Dakota. 8/16/2023 - 5/15/2024.
- Inbae Jeong (Principal Investigator). Development of Multi-UAV System for Context-Awareness and Seamless Operation. \$15,000 from the National Science Foundation. 1/1/2024 - 12/31/2025.
- Febina Merlin Mathew (Principal Investigator), Qifeng Zhang (Co-PI), Samiran Banerjee (Co-PI), Nancy Marie Hodur (Co-PI), Rajani Ganesh Pillai (Co-PI), Britt Jana Heidinger (Co-PI). Center for Climate-Conscious Agricultural Technologies (CCAT). \$676,793 from the National Science Foundation. 8/1/2023 - 7/31/2027.

RECENTLY SUBMITTED PROPOSALS

- Harun Pirim (Principal Investigator). Investigation of genotype-phenotype relationships in fetal alcohol spectrum disorders, microtia, and craniofacial microsomia using network science and machine learning. \$283,753 from the National Institutes of Health. 9/1/2024 - 8/31/2026.
- Jeremy A Straub (Principal Investigator). Computing hardware for cyber range. \$910,502 from the U.S. Air Force. 12/1/2024 - 11/30/2025.
- Jeremy A Straub (Principal Investigator). Creation of an Upper Great Plains AI Humanities Center. \$499,815 from the National Endowment for the Humanities. 7/1/2024 - 6/30/2027.
- Long Jiang (Principal Investigator), Jiha Kim (Co-PI), Raj Shankar Hazra (Co-PI). Injectable and implantable Soy Protein Based hydrogel for cancer treatment and tissue engineering. \$56,970 from the ND Soybean Council. 7/1/2024 - 6/30/2025.
- Xiaoyu Feng (Principal Investigator), Ademola Ayodeji Ajayi-Banji (Co-PI). Anaerobic Digestion of Soybean Meal for Biogas and Biofertilizer Productions: A Life Cycle Assessment. \$34,704 from the ND Soybean Council. 7/1/2024 - 6/30/2025.
- Jiale Xu (Principal Investigator). Remediation of brine spills by soybean fiber-activated materials. \$43,900 from the ND Soybean Council. 7/1/2024 - 6/30/2025.
- Xiangfa Wu (Principal Investigator), Oksana Zholobko (Co-PI). Fabrication of low-cost, biodegradable, antibacterial, green bioplastics via directly self-crosslinking soybean meals in mild conditions. \$65,056 from the ND Soybean Council. 7/1/2024 - 6/30/2025.
- Xiangfa Wu (Principal Investigator). Synthesis of soy-based phase-change materials for thermal energy storage of solar heating systems. \$59,256 from the ND Soybean Council. 7/1/2024 - 6/30/2025.
- Yan Zhang (Principal Investigator). The pulmonary visceral pleura (PVP) aortic valve. \$492,811 from the National Institutes of Health. 1/1/2025 - 12/31/2028.
- Janet J. Knodel (Principal Investigator), Patrick Beauzay (Co-PI), Andrew J Friskop (Co-PI), Samuel Markell (Co-PI), Adam Alan Marx (Co-PI), Esther Ebata McGinnis (Co-PI), Rob Proulx (Co-PI), Mr. Andrew Thostenson (Co-PI), Richard Wade Webster (Co-PI). Extension IPM Program of North Dakota. \$882,620 from the National Institute of Food & Agriculture. 9/1/2024 - 8/31/2027.

RECENT PUBLICATIONS

For 2024, 31 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:

- Amiri, Maryam, Fatemeh Sarani Rad, and Juan Li. 2024. "Delighting Palates with AI: Reinforcement Learning's Triumph in Crafting Personalized Meal Plans with High User Acceptance." *NUTRIENTS* 16 (3): 346. <https://doi.org/10.3390/nui16030346>.
- Balasooriya, Eranga R., Deshan Madhusanka, Tania P. Lopez-Palacios, Riley J. Eastmond, Dasun Jayatunge, Jake J. Owen, Jack S. Gashler, et al. 2024. "Integrating Clinical Cancer and PTM Proteomics Data Identifies a Mechanism of ACK1 Kinase Activation." *MOLECULAR CANCER RESEARCH* 22 (2): 137–51. <https://doi.org/10.1158/1541-7786.MCR-23-0153>.
- Saeed Kandezy, Reza, John Jiang, and Di Wu. 2024. "On SINDy Approach to Measure-Based Detection of Nonlinear Energy Flows in Power Grids with High Penetration Inverter-Based Renewables." *ENERGIES* 17 (3): 711. <https://doi.org/10.3390/en17030711>.
- Wang, Xin, Juan Li, Tianyi Liang, Wordh Ul Hasan, Kimia Tuz Zaman, Yang Du, Bo Xie, and Cui Tao. 2024. "Promoting Personalized Reminiscence Among Cognitively Intact Older Adults Through an AI-Driven Interactive Multimodal Photo Album: Development and Usability Study." *JMIR AGING* 7: e49415. <https://doi.org/10.2196/49415>.
- Wang, Xingyu, Sampada Koirala, Luyang Xu, Qiaobin Li, Danling Wang, Xiaoning Qi, Ying Huang, Zhongyu Yang, and Zhibin Lin. 2024. "Advancements in Emerging MXene-Integrated Nanocomposite Coatings: Unraveling

Defect-Free Microstructure for Superior Tribological, Mechanical, and Anti-Aging Features.” *PROGRESS IN ORGANIC COATINGS* 188 (March): 108206. <https://doi.org/10.1016/j.porgcoat.2023.108206>.

- Xu, Luyang, Shuomang Shi, Ying Huang, Fei Yan, Xinyi Yang, and Yi Bao. 2024. “Corrosion Monitoring and Assessment of Steel under Impact Loads Using Discrete and Distributed Fiber Optic Sensors.” *OPTICS AND LASER TECHNOLOGY* 174 (July): 110553. <https://doi.org/10.1016/j.optlastec.2024.110553>.

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.

