

COLLEGE HAPPENINGS

February 6, 2024

FROM THE INTERIM DEAN

Scholarship Importance, Celebration, and Deadline

Over the past few months, we have prioritized financial support for the new facility in our fundraising pursuits. However, that hasn't stopped us from continuing to raise philanthropic support for student scholarships to help us achieve our enrollment goals. The total cost of a four-year education continues to rise, forcing students to work more hours during the academic year or take on greater student-loan debt. Scholarship support, for many students, can be the deciding factor when they choose what school to attend, or if they will pursue a college degree at all.

This week, we have a special opportunity to hear from an organization that provides financial support for students. The Astronaut Scholarship Foundation awarded 68 scholarships this year to junior and senior students in STEM fields from 46 different universities across the United States. We are pleased that one of our students, Jacob Sundberg from mechanical engineering, was selected as one of the recipients of this prestigious scholarship. To honor his accomplishments, a former NASA astronaut, Joe Tanner, will give a presentation followed by Q&A during an award ceremony for Jacob. I encourage all of you to attend this special event to hear from a decorated astronaut on Thursday at 3:30 pm in the Alumni Center Atrium.

The ASF scholarship program is just one of many ways our students receive financial assistance in support of their academic endeavors. We have many additional scholarships that are available each year to students throughout the college, which have been made possible by the generous donations from alumni, industry partners, and friends of the college. Most of these internal scholarships can be applied for by filling out the online NDSU Scholarship Application form, with a deadline of March 1, 2024 for currently enrolled students. Please help spread the word about these scholarship opportunities, and encourage your students to apply using the following link:

<https://www.ndsu.edu/onestop/scholarships>.

Alan R. Kallmeyer, Ph.D.

Interim Dean | College of Engineering

IN THE NEWS

[‘The resources are definitely here’](#)

[NASA astronaut to visit campus](#)

[North Dakota wins up to \\$160 million in federal funding to support innovation, jobs, and economic growth in agriculture technology](#)

[NDSU agricultural and biosystems engineering celebrating 100th anniversary](#)

[ND Water Resources Research Institute Names four NDSU Faculty Fellows](#)

[Lego Robot tournament hosted at NDSU](#)

[FIRST LEGO League Tournament at NDSU](#)

[NDSU graduate student develops cancer detection machine \(Forum\)](#)

[NDSU graduate student develops cancer detection technology \(KVLV\)](#)

[NDSU doctoral student helps develop cancer detection technology \(KVRR\)](#)

[NDSU grad student develops early cancer detection technology \(Prairie Public\)](#)

CONGRATULATIONS

The **Bison Robotics Autonomous Snowplow Team** finished 3rd overall and was awarded the Golden Smile Award for best sportsmanship at the 14th Annual Autonomous Snowplow Competition in Minneapolis, MN. The team includes 18 students from a variety of majors in and out of the college.

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, February 7, **Spring Career Expo**. The Spring Career Expo provides a great opportunity for students to meet a wide variety of employers. Employers who attend are actively looking for student talent to fill both full-time positions and internships/co-ops. 11:00 a.m. – 3:00 p.m. at the Fargodome.

Thursday, February 8, **Astronaut Scholarship Celebration**. NASA Astronaut Joe Tanner and officials from the Astronaut Scholarship Foundation will visit NDSU to honor recent Astronaut Scholarship recipient and College of Engineering student Jacob Sundberg. 3:30 – 5 p.m. NDSU Alumni Center.

Wednesday, February 14, **Including U: Black Women in Higher Education**. The event will feature a panel discussion featuring Nadeje Alexadre, Carol Okigbo, Rose Marcellus, and Bethany Hardwig. 12:00 to 1:00 p.m. via [Zoom](#).

Thursday, February 22, **Talkback to Racism 2024**. In honor of Black History Month, the Anti-Racism Coalition is organizing the fourth annual Talkback to Racism from 3:30- 4:45 p.m. at the MU Anishinaabe Theater.

ENGINEERING AMBASSADOR MEMBERSHIP DRIVE

New member recruitment for the **Engineering Ambassadors** is underway. New members are needed from each department in the college. Applications are due by Friday, February 9th at 5:00PM. The membership application can be completed using this [Google Form](#).

Engineering Ambassadors are a distinguished group of undergraduate students selected to represent the College of Engineering at events for alumni, industry leaders, prospective students, and current students. Applicants must:

- Be enrolled as an undergraduate student in the college (at least a 2nd semester freshman and graduate no earlier than Dec. 2025)
- Have a minimum cumulative GPA of 2.75
- Be willing to make a 3-semester commitment (minimum) to the organization

New members are selected through a competitive application and interview process based on scholarship, communication skills, enthusiasm, honesty, leadership and knowledge of the college and university. If you know a student who would make a great Ambassador, please encourage them to apply.

SPRING 2024 RESEARCH WORKSHOPS

Students (undergraduate and graduate) and mentees/postdocs are encouraged to attend the Spring 2024 Research Workshops. Make sure to let them know lunch is included!

Poster Preparation and Abstract Writing Workshop

- Thursday, February 29
- 11:00 a.m. to 12:30 p.m.
- Location: Memorial Union – Hidatsa Room

Topic: How to write an abstract and prepare a poster. This workshop is presented by the Center for Writers.

Register [>>> here](#) by Friday, February 23

NSF ISSUES PROPOSAL & AWARD POLICIES & PROCEDURES GUIDE, WEBINAR OFFERED

The National Science Foundation (NSF) has announced that a revised version of the **NSF Proposal & Award Policies & Procedures Guide (PAPPG) (NSF 24-1)** has been issued. The new PAPPG will be effective for proposals submitted or due on or after May 20, 2024. While this version of the PAPPG becomes effective on May 20, 2024, in the interim, the guidelines contained in the current [PAPPG \(NSF 23-1\)](#) continue to apply.

NSF will present information about these changes in a webinar — **Updates to the NSF Proposal and Award Policies and Procedures Guide (PAPPG) (NSF 24-1)** on Tuesday, March 12, from 2:00 – 3:00 PM EST. There is no cost to participate. The webinar will cover changes and clarifications to the PAPPG which will be effective for proposals submitted or due on or after May 20, 2024.

A by-chapter [Summary of Changes](#) provides a quick overview of the changes to this PAPPG (NSF 24-1). Questions prior to the webinar should be sent to grants_conference@nsf.gov.

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.

University Research Collaboration Program

North Dakota State University (NDSU) and University of North Dakota (UND) announce a joint call for the University Research Collaboration Program, funded by the Economic Diversification Research Funds (EDRF) appropriated in the 2023 Legislative session. The University Research Collaboration Program requires a project where faculty from UND collaborate with faculty at NDSU and include faculty or students from a third North Dakota institution (i.e., a predominantly undergraduate institution, polytechnic institution and/or a Tribal college or university). A call next fiscal year is also anticipated for the year two funds.

The newly launched University Research Collaboration Program seeks pilot collaboration projects that foster research collaboration across institutions. The funds should support activities (data collection, materials, experimental or instrumentation needs, etc.) for a pilot project to for submission to an external funder. All proposals must include NDSU, UND and a third higher education institution (NDUS or NDTCS) to be considered for funding.

[Learn more and apply >>](#)

RECENTLY AWARDED GRANTS

- Kalpana Katti (Principal Investigator), Dinesh R Katti (Co-PI). Effect of microgravity and higher radiation on healing and metastasis potential of omentum. \$82,150 from the National Aeronautics and Space Administration. 7/28/2023 - 7/27/2025.

RECENTLY SUBMITTED PROPOSALS

- Kalpana Katti (Principal Investigator), Dinesh R Katti (Co-PI). Evaluating Gastric Cancer Omental Interactions using an Omentum Testbed. \$94,998 from the National Institutes of Health. 3/1/2024 - 2/28/2025.
- Jiale Xu (Principal Investigator), Ying Huang (Co-PI), Pan Lu (Co-PI), Wen Wang (Co-PI). MAT-KENLAND: Mitigating Climate Change Risk from PFAS with Artificial Intelligence (AI) and Toxic Use Reduction (TUR) Strategies through Kentucky, Louisiana and North Dakota Partnerships. \$1,600,000 from the National Science Foundation. 10/1/2024 - 9/30/2028.
- Zhibin Lin (Principal Investigator), Xuefeng Chu (Co-PI), Long Jiang (Co-PI), Danling Wang (Co-PI). BEST-CASE: Bringing Water-Food Equity and Security Toward Climate-Adaptive Under-Served Communities. \$2,000,000 from the National Science Foundation. 8/16/2025 - 8/15/2029.
- Pan Lu (Principal Investigator), Ying Huang (Co-PI), Denver D Tolliver (Co-PI). Expanding Summer Youth Programs in Rail through Virtual Learning and a National Campus Network. \$19,500 from the Federal Railroad Administration. 8/1/2023 - 7/31/2024.
- Ahmed Mohamed Harb Rabia (Principal Investigator), Rob Proulx (Co-PI), Xin Sun (Co-PI), Joao Paulo Cassol Flores (Co-PI). AI-based Detection of Palmer Amaranth in Soybean Fields using Deep Learning. \$109,899 from the ND Department of Agriculture. 1/1/2024 - 12/31/2024.
- Jeremy A Straub (Principal Investigator). SBIR MDA241-003. \$49,952 from the Department of Defense. 5/1/2024 - 2/28/2025.
- Xin Sun (Principal Investigator). Palmer Amaranth UAS Grant Program. \$93,840 from the ND Department of Agriculture. 1/1/2024 - 12/31/2024.

- Adam Curtis Gladen (Principal Investigator). IRES: Research to Support Energy Sovereignty for Indigenous Peoples. \$7,073 from the National Science Foundation. 1/1/2025 - 12/31/2025.

RECENT PUBLICATIONS

For 2024, 23 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:

- Graupman, Malachi, Peter J. Vikesland, Stephanie C. Bolyard, Brian Brazil, Partho Pritom Mondal, Achintya N. Bezbaruah, Kelly A. Rusch, Dario Caro, and Syeed Md Iskander. 2023. "Evaluating the Ecological Footprint of Landfills: A Framework and Case Study of Fargo, North Dakota." *ENVIRONMENTAL SCIENCE & TECHNOLOGY* 57 (50): 21113–23. <https://doi.org/10.1021/acs.est.3c06071>.
- Zar, Ali, Zahoor Hussain, Muhammad Akbar, Timon Rabczuk, Zhibin Lin, Shuang Li, and Bilal Ahmed. 2024. "Towards Vibration-Based Damage Detection of Civil Engineering Structures: Overview, Challenges, and Future Prospects." *INTERNATIONAL JOURNAL OF MECHANICS AND MATERIALS IN DESIGN*, January. <https://doi.org/10.1007/s10999-023-09692-3>.
- Zhang, Dawei, Yang Wang, Maryam Safaripour, Daniel A. Bellido-Aguilar, Kurt R. Van Donselaar, Dean C. Webster, Andrew B. Croll, and Wenjie Xia. 2024. "Energy Renormalization for Temperature Transferable Coarse-Graining of Silicone Polymer." *PHYSICAL CHEMISTRY CHEMICAL PHYSICS*, January. <https://doi.org/10.1039/d3cp05969c>.

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.

