

COLLEGE HAPPENINGS

June 13, 2023

FROM THE INTERIM DEAN

Welcome to the herd

This week marks the beginning of new student orientation activities on campus. Throughout the month of June, we will welcome thousands of new first-year and transfer students and their guests to NDSU to become more acquainted with campus, answer questions they may have, and register for fall semester classes. It is an exciting time for our newest group of students as they begin their NDSU experience, and an opportunity for all of us to help make them feel welcome on this campus that they will call home for the next few years.

First impressions are always important and can set the tone for a strong relationship. For our incoming students, the first few interactions they have with faculty and staff on campus can make a big difference in their perception of NDSU. Students who feel welcome and become engaged in campus activities are more likely to be successful in their academic pursuits. As we seek to improve the retention of our students, and particularly first-year retention, it is important that we help to create an environment that is welcoming, supportive, and inclusive. I want to especially recognize and thank our staff and the faculty who put in the effort preparing for, working with, and welcoming these new students. This is important work, and we are fortunate to have a great team to help the Class of '27 leave orientation excited with anticipation of returning in August.

Whether you have a direct role in orientation activities or just happen to see some students or parents on campus over the next few weeks, please take a moment to say hi, greet them with a smile, and answer any questions they may have. Show off your Bison Pride and welcome these future students into our Bison family. Let's make a great first impression on these students and help them to succeed in their pursuit of a college education at NDSU!

Alan R. Kallmeyer, Ph.D.

Interim Dean | College of Engineering

IN THE NEWS

['Real-world applications of what we are studying'](#)

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

July 10-13, **STEM Kids Camp Session 1**. Students in grades K-8 will be on campus for a variety of summer kids camps focused on topics in STEM. Morning sessions will run from 9 a.m. - 12 p.m., and afternoon sessions will run from 1 p.m. - 4 p.m.

July 17-20, **STEM Kids Camp Session 2**. Students in grades K-8 will be on campus for a variety of summer kids camps focused on topics in STEM. Morning sessions will run from 9 a.m. - 12 p.m., and afternoon sessions will run from 1 p.m. - 4 p.m.

July 24-27, **STEM High School Camp**. Mornings will be spent on campus working with NDSU faculty in the labs and afternoons students will be going out on engineering industry visits.

Wednesday, August 9, **Academic Leaders Orientation and Retreat** for Department Chairs/Heads and Deans.

Tuesday, August 15, **New Faculty Orientation**. This event is intended for faculty that have started at NDSU since August 16, 2022. [Register Here](#)

Wednesday, August 16, **Annual Faculty/Academic Staff Conference**. Presentations by NDSU faculty and staff demonstrating best practices for research, instruction, advising, assessment, campus climate, inclusion, mentoring, leadership, and classroom technologies. [Register Here](#)

SAFE ZONE AND COMMUNITY OF RESPECT TRAINING

Community of Respect

The Office of the Vice Provost for Faculty and Equity will be offering a series of Cultural and Cultural Diversity Trainings as part of the Community of Respect series. Sessions will be via zoom and zoom link will be sent out to those registered a few days prior.

Dates offered will be:

- Module 1 Cultural and Cultural Diversity, Wednesday, June 14 from 1:00 pm -3:00 pm
- Module 2, Redefining Diversity, Wednesday, June 21 from 1:00 pm- 3:00 pm
- Module 3, Microaggressions, Wednesday, June 28 from 1:00 pm- 3:00 pm
- Module 4, Confronting Bias, Wednesday, July 5 from 1:00 pm- 3:00 pm

To Register go to the following link: https://www.ndsu.edu/facultyaffairs/inclusion/trainings/community_of_respect/

The objective of the Community of Respect seminars are to teach individual participants about cultural differences and to encourage them to think critically about the impact of their cultural values in their relationships with others. The curriculum is organized into four separate modules with distinct learning outcomes outlined in each.

Safe Zone

The Office of the Vice Provost for Faculty and Equity will be offering the Safe Zone Training series. Sessions will be via zoom and zoom link will be sent out to those registered a few days prior.

Dates offered:

- Level 1 “Becoming an Ally”, Tuesday, June 13 from 10:00 am-noon
- Level 2 “Gender Identity and Expression” Tuesday, June 20 from 10:00 am - noon
- Level 3 “Upstander”, Tuesday, June 27 from 10:00 am-noon

To Register please go to the following link: https://www.ndsu.edu/facultyaffairs/inclusion/trainings/safe_zone/

Safe Zone is a program designed to:

- Educate people about sexual orientation and gender identity/expression issues.
- Create a visible network of Allies to provide support to the NDSU lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ+) community.
- Provide accurate information about sexual orientation and gender identity/expression diversity, issues, and resources within the community

FUNDING OPPORTUNITIES

NDSU Foundation Impact Grants

The NDSU Foundation Grants Committee is accepting applications for the 2023 Impact Fund Grant Program. [Apply today!](#)

The application deadline is **Wednesday, August 2, 2023, by 4:30 p.m.**

The Impact Fund Grant Program provides funding for projects that make a significant impact on excellence and the educational experience for students at North Dakota State University. This program is supported by annual contributions from alumni and friends of the University.

Applications are accepted from faculty, staff, and recognized student groups. The Impact Fund Grant Program offers grants of \$20,000 to \$75,000. Find more information on the [NDSU Foundation website](#).

Questions? Email Janna Swanson, Grants Committee Staff Liaison, at janna.swanson@ndsufoundation.com.

NSF: Boosting Research Ideas for Transformative and Equitable Advances in Engineering (BRITE)

This solicitation [[NSF 23-592](#)] seeks proposals that enable experienced researchers with active research programs to take risks not typically associated with proposals submitted to core programs by pivoting to research areas where they have no proven track record, gaining knowledge from a different discipline and using it to forge new directions in their research field, or exploring divergent, bold, and ambitious research ideas where the expected scientific outcomes are highly uncertain and the potential to transform a field is significant, or experienced researchers with a hiatus in research activity to reestablish a foundation for sustained research productivity and broader impacts. It is grounded in the expectation that leveraging prior science and engineering outcomes, harnessing talent from the broad scientific research community, enabling time for reflection and deliberation, including by learning new skills and through immersion in new areas, and supporting intellectual risk taking will lead to scientific and technological innovation.

All BRITE proposals are expected to address fundamental research that creates new knowledge in one or more program areas of the Division of Civil, Mechanical and Manufacturing Innovation (CMMI). BRITE proposals must identify key research outcomes and describe the research plans for the period of funding sought. Although collaborative proposals are not permitted and will be returned without review, the PI can include a collaborator as senior personnel. The role of such senior personnel should be limited to reflect the intended investment in the PI.

The solicitation includes three funding tracks in support of experienced scientists and engineers (tenured or equivalent): Pivot, Relaunch, and Fellow.

- The **BRITE Pivot** Track is intended to enable researchers to quickly adapt to the fast-moving pace of research by either leveraging their experience when pursuing a pivot into a field of research where they have no proven track record, or by incorporating research tools and methodologies from other fields of research to advance knowledge in their areas of expertise.

- The **BRITE Relaunch** Track is intended to enable researchers who have had a hiatus in research activity to relaunch back into active research by reestablishing a foundation for sustained productivity and broader impacts in the context of a research idea with significant potential for advancing knowledge.
- The **BRITE Fellow** Track is intended to support researchers who have demonstrated significant impact through and beyond scientific output to request extended time and freedom to use their intellectual creativity to explore divergent, bold, and ambitious research ideas where the expected scientific outcomes are highly uncertain and, therefore, high risk.

Deadline: September 28, 2023

RECENTLY AWARDED GRANTS

- Ademola Monsur Hammed (PI), Ewumbua Monono (CPI), Niloy Chandra Sarker (CPI). Bioconversion and bioaugmentation of soybean meal for sustainable biofertilizer production. \$65,150 from the ND Soybean Council. 7/1/2023 - 6/30/2024.
- Xiaoyu Feng (PI), Ademola Ayodeji Ajayi-Banji (CPI). Anaerobic Digestion of Defatted Soybean Meal for Biogas and Biofertilizer Productions. \$35,124 from the ND Soybean Council. 7/1/2023 - 6/30/2024.
- Ademola Monsur Hammed (PI), Ewumbua Monono (CPI), Niloy Chandra Sarker (CPI). Digestibility and toxicity of corn-based Bale net wrap. \$71,496 from the ND Corn Utilization Council. 7/1/2023 - 7/1/2025.
- Long Jiang (PI). Flame-retardant, mildew-resistant soy adhesive for foamed wood siding and other wood products. \$36,871 from the ND Soybean Council. 7/1/2023 - 6/30/2024.
- Long Jiang (PI). Soy-based Bailing Twine with High Digestibility Further Development. \$44,932 from the ND Soybean Council. 7/1/2023 - 6/30/2024.
- Changhui Yan (CPI). A Novel Soybean Selection Method for Tofu Production Using Machine Learning. \$44,127 from the ND Soybean Council. 7/1/2023 - 6/30/2024.

RECENTLY SUBMITTED PROPOSALS

- Jordi Estevadeordal (PI), Yildirim Bora Suzen (CPI). Integrating Advanced Monitoring Techniques to Mitigate Environmental Factors in Storage Systems to Reduce Postharvest Losses. \$51,000 from the Agricultural Research Service. 5/16/2023 - 8/15/2025.
- Ying Huang (PI). Incorporating Fiber Optics into Wellbore Design and Monitoring. \$150,000 from the Pipeline and Hazardous Materials Safety. 9/29/2023 - 9/28/2025.
- Ying Huang (PI), Jun Kong (CPI). Dual Purpose PIG for Cleaning and Internal Integrity Assessment for Hazardous Liquid Pipelines. \$1,000,000 from the Department of Transportation. 10/1/2023 - 9/30/2025.
- Ying Huang (CPI), Xingyu Wang (CPI). Novel Green Enzyme@MOF Biocomposite-based Inhibitors For Mitigating Internal Corrosion in Pipelines. \$360,000 from the Department of Transportation. 10/3/2023 - 9/30/2026.
- Zhibin Lin (PI), Juan Li (CPI). CLIMA: EAGER: Collaborative Research: Launching Equitable, Adaptive Pathways toward Climate change Mitigation and Adaption in civil infrastructure transition (LEAP-CliMA): Exploring new lifelong design. \$300,000 from the National Science Foundation. 9/1/2023 - 8/31/2025.
- Joao Paulo Cassol Flores (CPI). Increasing Genetic Gain for Climate Resilience in Pulse Crops Using Genomic Selection and High Throughput Phenotyping. \$1,566,671 from the National Institute of Food & Agriculture. 10/1/2023 - 9/30/2026.

RECENT PUBLICATIONS

For 2023, 79 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:

- Gaikwad, Hanmant K., Sharad V. Jaswandkar, Kalpana S. Katti, Amanda Haage, and Dinesh R. Katti. 2023. “Molecular Basis of Conformational Changes and Mechanics of Integrins.” *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 381 (2250): 20220243. <https://doi.org/10.1098/rsta.2022.0243>.
- Straub, Jeremy. 2022. “Increasing Trust in Artificial Intelligence with a Defensible AI Technique.” In *2022 IEEE Applied Imagery Pattern Recognition Workshop (AIPR)*, 1–7. DC, USA: IEEE. <https://doi.org/10.1109/AIPR57179.2022.10092226>.
- Yasoda, Ratna Divya, Nour Hakim, Ying Huang, and Xiaoning Qi. 2023. “Post-Fire Analysis of Thermally Sprayed Coatings: Evaluating Microstructure, Mechanical Integrity, and Corrosion Behavior.” *Processes* 11 (5): 1490. <https://doi.org/10.3390/pr11051490>.
- Zhou, Yuhan, Huanhai Xin, Di Wu, Feng Liu, Zhiyi Li, Guanzhong Wang, Hui Yuan, and Ping Ju. 2023. “Small-Signal Stability Assessment of Heterogeneous Grid-Following Converter Power Systems Based on Grid Strength Analysis.” *IEEE Transactions on Power Systems* 38 (3): 2566–79. <https://doi.org/10.1109/TPWRS.2022.3183005>.

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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