

COLLEGE HAPPENINGS

January 11, 2022

FROM THE DEAN

The Impact of James Sugihara

Welcome back for the start of another new semester at NDSU.

Yesterday, I attended the ribbon cutting for the new Sugihara Hall. After watching from my office window the demolition of the former geosciences building and the construction of the new science building over the past two years, it was exciting to finally see and celebrate the official opening to the facility. Sugihara Hall is named in honor of Dr. James Sugihara, a longtime NDSU faculty member and administrator who died two years ago at 101 years old.

One of the speakers at the event was a University Distinguished Professor Emeritus, Neil Gudmestad. Professor Gudmestad told the story about how Dr. Sugihara had played an essential role in a critical juncture in his career. When Gudmestad was a brand-new graduate student, he was ready to quit because he felt unprepared and lacked the confidence to succeed in graduate school. However, Dr. Sugihara had encouraged him that he would be successful, giving him the confidence he needed to succeed. Sugihara continued to follow up with Gudmestad during his studies, checking in and encouraging him. Of course, Gudmestad did succeed in earning his Ph.D. at NDSU. He went on to a distinguished career in plant pathology, making significant contributions to real-world disease solutions for the potato industry. However, that almost didn't happen. Gudmestad said that he would have dropped out if it were not for Sugihara's support and encouragement.

The story reminded me of the impact that a supportive faculty or staff member can have on a student at a critical junction in their life. I hope this story encourages you to continue to seek opportunities to build connections with and encourage your students, look for ways to provide mentorship and rise to the challenge of making them excited to learn. Like Sugihara did with Gudmestad, we can profoundly impact our students' lives.



IN THE NEWS

[NDSU receives \\$6M award to develop an AI-enabled sustainable energy infrastructure network](#)

[Celebrating the academic excellence of our student-athletes](#)

[Leon Schumacher joins North Dakota State University](#)

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

Wednesday, January 26, **Project Implicit**. The ADVANCE Partnership Project is hosting a virtual session on implicit bias presented by Sylvia Perry, Associate Professor of Psychology at Northwestern University from Project Implicit. 11 a.m. – 12:30 p.m. [Register Here](#).

SAFE ZONE TRAINING

The Office of the Vice Provost for Faculty and Equity will be offering the Safe Zone Training series. 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, and provide accurate information about sexual orientation and gender identity/expression diversity, issues, and resources within the community.

Dates offered:

- Level 1 “Becoming an Ally”, February 22, 2022, from 10:00 am-noon in the Sahnish room
- Level 2 “Gender Identity and Expression”, March 1, 2022, from 10:00 am-noon in the Sahnish room
- Level 3 “Upstander”, March 8, 2022, from 10:00 am-11:30 am in the Sahnish room

To Register please go to the following link: https://www.ndsu.edu/equity/prevention_education/

CULTURAL AND CULTURAL DIVERSITY TRAININGS

The Office of the Vice Provost for Faculty and Equity will be offering a series of the Cultural and Cultural Diversity Trainings as part of the Community of Respect series. 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.

Dates offered will be:

- Module 1 Cultural and Cultural Diversity, February 3 from 9:00 am -11:00 am in the Sahnish room in the Memorial Union (formally the Arikara room)
- Module 2, Redefining Diversity, February 10 from 9:00 am- 11:00 am in the Sahnish room in the Memorial Union (formally the Arikara room)
- Module 3, Microaggressions, February 17 from 9:00 am- 11:00 in the Sahnish room in the Memorial Union (formally the Arikara room)
- Module 4, Confronting Bias, February 24 from 9:00 am- 10:30 am in the Sahnish room in the Memorial Union (formally the Arikara room)

To Register go to the following link: https://www.ndsu.edu/equity/prevention_education/

SUMMER UNDERGRADUATE BIOMEDICAL RESEARCH PROGRAM

The NDSU Office of Research and Creative Activity (RCA) is seeking faculty mentors and research projects for a summer undergraduate biomedical research program. The program’s participants will be undergraduate students attending colleges and universities in North Dakota. Funded by the North Dakota IDeA Network of Biomedical Research Excellence

(ND INBRE), the program's goal is to expose the state's undergraduate STEM major students to careers in the biomedical sciences.

The 10-week program will run from May 31, 2022 to August 5, 2022. Participating students are expected to conduct research independently for approximately 40 hours per week, participate in weekly mentoring by faculty and project leaders, and attend workshops, trainings, and other activities organized by the RCA office. Through the funds received from the grant, the RCA office will cover the following costs for each undergraduate researcher:

- Summer positions will pay \$15/hour. It is expected that students will work 40 hours per week.
- Funds up to \$500 will be available to purchase consumable research materials and for the use of NDSU core facilities.
- Student on-campus housing will be provided for non-NDSU students who would need to relocate to Fargo for the program.

[Learn more and submit an application >>](#)

PROGRAMMATIC REQUESTS

Each year congressional delegations have the opportunity to submit programmatic funding requests for federal research programs. Programmatic requests are designed to add additional funding to federal agencies' budgets with the intent that a competitive funding opportunity will be released in connection with the funding increase.

NDSU's process for submitting requests for consideration is on the [RCA website](#). The deadline for FY2023 submissions to RCA is January 28, 2022. If anyone has questions about the process or would like to discuss a potential idea, please contact nds.researchdev@nds.edu.

FUNDING OPPORTUNITIES

DoD ONR: Science & Technology for Advanced Manufacturing Projects

The focus of this Broad Agency Announcement (BAA) [[N00014-22-S-0002](#)] is primarily on projects that continue to advance the systems engineering approach needed for the design, fabrication, and manufacture of structural components to address challenges in system weight, performance, affordability, and / or survivability. The foundation of this approach should include the integration of materials information, captured in computational tools, with engineering product performance analysis and manufacturing-process simulation termed commonly as Integrated Computational Materials Engineering (ICME). From this foundation it is expected the integration of manufacturing process information and product performance information utilizing the full range of engineering and analytical tools, processes, and principles to improve efficiency and effectiveness of their integrated approach. The intent is to bring together materials designers, materials suppliers, product designers, and manufacturers to collaborate on the design, production, and commercialization of novel affordable, manufacturable systems. Projects may include basic and applied research, technology and component development, and prototyping, but may also focus on manufacturing supply-chain technical support and integration, workforce development, and manufacturing education.

Prior to preparing proposals, potential offerors are strongly encouraged to contact the ONR technical point of contact identified for this program.

This BAA will remain open through November 30, 2022

NSF: Faculty Early Career Development Program

CAREER: The Faculty Early Career Development (CAREER) Program [[NSF 20-525](#)] is a Foundation-wide activity that offers the National Science Foundation's most prestigious awards in support of early-career faculty who have the potential

to serve as academic role models in research and education and to lead advances in the mission of their department or organization. Activities pursued by early-career faculty should build a firm foundation for a lifetime of leadership in integrating education and research. NSF encourages submission of CAREER proposals from early-career faculty at all CAREER-eligible organizations and especially encourages women, members of underrepresented minority groups, and persons with disabilities to apply.

RCA is offering an NSF and CAREER Proposal Development Program during the 2022 Spring Semester. [Learn more >>](#)

NSF CAREER deadline: July 25, 2022

RECENTLY FUNDED GRANTS

- Dharmakeerthi Nawarathna (PI). Cytotoxic effects of chimeric antigen receptor T-cells manufactured by radio-frequency electric fields. \$74,994 from the National Institutes of Health. 09/01/2021 – 09/01/2021.
- Wenjie Xia (PI). ND-ACES Early Career Faculty award. \$4,978.72 from ND EPSCoR. 12/23/2021 – 6/30/2022.
- Trung Le (PI). ND-ACES Early Career Faculty award. \$4,978.72 from ND EPSCoR. 12/23/2021 – 6/30/2022.
- Lu Liu (PI). ND-ACES Early Career Faculty award. \$4,978.72 from ND EPSCoR. 12/23/2021 – 6/30/2022.
- Shuvashis Dey (PI). ND EPSCoR State Office equipment award for a Keysight E8361C Programmable VNA. \$75,000 from ND EPSCoR. 12/23/2021 – 06/30/2022.
- Chad Ulven (PI). ND EPSCoR State Office equipment award for a CNC Waterjet Machining Center. \$75,000 from ND EPSCoR. 12/23/2021 – 06/30/2022.
- Inbae Jeong (PI). ND EPSCoR State Office equipment repair award. \$6,112.65 from ND EPSCoR. 12/23/2021 – 6/30/2022.
- Achintya Bezbaruah (PI). ND EPSCoR State Office equipment repair award. \$6,500 from ND EPSCoR. 12/23/2021 – 6/30/2022.
- Jeremy A Straub (PI). Support for Cybersecurity Training for High School Educators. \$11,293 from the National Security Agency. 01/01/2022 - 12/31/2023.
- Chad A Ulven (CPI). Preliminary Exploration of Poly lignin Biomass for Non-isocyanate Rigid Foams. \$9,998 from Plain Sight Innovations LLC. 9/15/2021 - 3/14/2022.
- Wenjie Xia (CPI). Understanding the Principles of Solid Shedding Surfaces - Phase II. \$4,726,763 from the U.S. Navy. 12/1/2021 - 11/30/2024.

RECENT PUBLICATIONS

For 2022, 8 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:

- Jang, Junbong, Jungyeon Jang, Michele Barbato, Maria Teresa Gutierrez-Wing, Kelly A. Rusch, and Jongwon Jung. 2021. "Effects of Fluorogypsum and Quicklime on Unconfined Compressive Strength of Kaolinite." *Journal of Coastal Research*, 126–30. <https://doi.org/10.2112/JCR-SI114-026.1>.
- Hansen, Jared W., Ellen M. Swartz, Jerika D. Cleveland, Sajid M. Asif, Benjamin Brooks, Benjamin D. Braaten, and Daniel L. Ewert. 2020. "A Systematic Review of *In Vitro* and *In Vivo* Radio Frequency Exposure Methods." *IEEE Reviews in Biomedical Engineering* 13: 340–51. <https://doi.org/10.1109/RBME.2019.2912023>.
- Hong, Chansol, Inbae Jeong, Luiz Felipe Vecchiatti, Dongsoo Har, and Jong-Hwan Kim. 2021. "AI World Cup: Robot-Soccer-Based Competitions." *IEEE Transactions on Games* 13 (4): 330–41. <https://doi.org/10.1109/TG.2021.3065410>.
- Huda, Md Sanaul, and Nurun Nahar. 2021. "Oil Recovery from Dry Grind Ethanol Plant Coproducts Using Ethanol." *Processes* 9 (12): 2282. <https://doi.org/10.3390/pr9122282>.

- Islam, Md Zahirul, and Chad A. Ulven. 2022. “Effect of Loading Frequency on the High Cycle Fatigue Strength of Flax Fiber Reinforced Polymer Matrix Composites.” *Journal of Renewable Materials* 10 (5): 1185–1200. <https://doi.org/10.32604/jrm.2022.018018>.
- Johns-Rahnejat, Patricia M., Ghodrat Karami, Reza Aini, and Homer Rahnejat. 2021. “Fundamentals and Advances in Elastohydrodynamics: The Role of Ramsey Gohar.” *Lubricants* 9 (12): 120. <https://doi.org/10.3390/lubricants9120120>.
- Ritter, Noah, and Jeremy Straub. 2021. “Implementation of Hardware-Based Expert Systems and Comparison of Their Performance to Software-Based Expert Systems.” *Machines* 9 (12): 361. <https://doi.org/10.3390/machines9120361>.
- Zhang, Yuehong, Mengjiao Zhai, Fei Ma, Yuzhan Li, Bin Lyu, Tuan Liu, Zhenhua Gao, Liwei Wang, Dan Vincent, and Michael R. Kessler. n.d. “Fully Eugenol-Based Epoxy Thermosets: Synthesis, Curing, and Properties.” *Macromolecular Materials and Engineering*, 2100833. <https://doi.org/10.1002/mame.202100833>.

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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