

COLLEGE HAPPENINGS

October 27, 2020

FROM THE DEAN

Integrating Industry with Research and Education

In my very first year as Dean of Engineering at NDSU, I attended the Engineering and Technology career fair in the FargoDome. My goal was to spend some time talking with representatives from each of the companies recruiting our students. After getting down just the first row, I realized that it would be impossible to talk to all 250+ companies that were represented there in the time available. However, I did talk with many of them, and I continue to value the opportunities I get to engage with representatives from companies that hire our students. One of the questions I like to ask is, what is it about our students that keeps you coming back to hire more. Many of the answers that I hear, of course, include technical competency, but I also hear responses related to themes about our students' hard work ethics, can do attitudes, and strong leadership and innovation skills. I've learned through these discussions that one of the greatest assets of the College of Engineering is the strong reputation of our graduates with industry. That strength is a competitive advantage that we need to continue to grow.

This is why one of the [four strategic initiatives](#) for the College of Engineering is to Integrate Industry with Research and Education. For example, we would like to increase the number of industry experiences for students (like internships and co-ops). In addition, we'd like to grow our research partnerships with industry. One great example of growing research partnerships is the [Center for Bioplastics and Biocomposites](#) led by David Grewell, which brings together more than 30 member companies and the NSF to tackle research and development projects related to plastics, coatings, adhesives, and composites, from bio-renewable feedstocks. We would also like for our individual faculty to build strong relationships with key industry partners. One of the ways that we propose to do that is by facilitating an **industry-faculty fellowship program**, where interested faculty can spend a summer or a sabbatical working onsite with strategic companies. These faculty fellowship programs, somewhat analogous to internships that many of our students participate in, would allow our faculty an opportunity to gain valuable industry experience to enhance their teaching, and build key partnerships with the company that could blossom into further collaborations and opportunities for our students and research ambitions. Over the next few weeks, we'll be soliciting input to see which faculty may be interested in participating in the industry-faculty fellowship program down the road.



IN THE NEWS

[Civil engineering professor to give Faculty Lectureship](#)

[More college students choosing online over in-person classes amid pandemic](#)

[Agriculture, engineering are a good combination for young farmer from Oslo, Minnesota](#)

[Indigenous Peoples' Day celebrated on campus](#)

CONGRATULATIONS

Dinesh Katti, Jordan A. Engberg Presidential Professor and professor of civil engineering, will give the **59th Faculty Lectureship**, one of NDSU's oldest and most prestigious awards. His lecture, "Materials Engineered Byte by Byte," is scheduled **Tuesday, Oct. 27, at 7:00 p.m. via Zoom**. Originally planned for last spring, the lecture was postponed due to the pandemic.

Please let [College Happenings](#) know about honors, awards, new grants and other announcements so we can share them with other faculty and staff.

COVID-19 UPDATES

Remote Access to Classroom Instructor Computers Now Available

IT has piloted and rolled out a new technology called LogMeIn Central, which will allow instructors to log in to an instructor station in a classroom remotely, from their office or from home. They anticipate this will be most useful for instructors who will not have TA's in their classrooms in the spring semester, but it is available to start using now. The software meets the critical need identified by instructors, but has many steps to it and can be a bit confusing. Please note the first step in the instructions is to contact the IT Help Desk to provision your account before the first time logging in. Full instructions are here: <https://kb.ndsu.edu/106390>

Log into Zoom with Campus-wide License – Free Accounts using NDSU Email Addresses Causing Issues

IT is hearing about several issues including error messages or issues with meeting or class participants not being able to use the breakout room function in Zoom. Many of these issues are resolved by having users log in to Zoom using our NDSU campus license. Many users set up free Zoom accounts using their NDSU email address before our campus license was in place. By using these accounts, these users are not benefiting from the full features of the campus license and authentication. Instructions to log in to the campus license of Zoom are found here: <https://kb.ndsu.edu/106637>

Plugging in Lapel Mics Correctly in Instructor Stations

IT is seeing issues of lapel mics being plugged into the instructor station belt pack incorrectly, resulting in the bending or breaking of connectors. This causes the units to work inconsistently or completely fail. These are very expensive to replace and are also difficult to get from suppliers now, so they ask instructors to use extra care in plugging them in and removing them. Instructions for connecting them are here: <https://kb.ndsu.edu/106766>

UPCOMING EVENTS

Tuesday, October 27, **59th Faculty Lectureship entitled "Materials Engineered Byte by Byte" by Dr. Dinesh Katti**. The event will be presented at 7:00 p.m. via Zoom. Check your email for the Zoom meeting information.

Thursday, October 29, **(dis)Credit: Erasure and Scrutiny of Women** with Dr. Donna M. Riley, Kamyar Haghghi Head of the School of Engineering Education, Purdue University. This virtual presentation will enhance awareness of gender bias and continued lack of diversity, especially in STEM fields is hosted by the ADVANCE Partnership Project [Joining Forces](#), an NSF-Funded collaboration between NDSU, Iowa State University, Michigan Technological University, and Western Michigan University. RSVP: <https://bit.ly/2GtNO>

Friday, October 30, Faculty Virtual Luncheon, **"Faculty Mental Health during the Pandemic" with Dr. Kathryn Gordon, Sanford Health**. 11:30 a.m. – 1:00 p.m. via Zoom. [Register Now](#).

Tuesday, November 3, "**A Conversation with Arthur Brooks.**" 3:00 – 4:00 p.m. on Zoom. This event is free and open to all NDSU faculty, staff and students. You must [pre-register](#) on Zoom.

CAMPUS KUDOS

The Staff Recognition Committee is happy to announce that Staff Senate is seeking nominations for Campus Kudos awards.

Campus Kudos is a certificate of appreciation for NDSU employees (to include staff, faculty, and student workers), issued as a heart-felt thanks for contributions to campus and the people on campus. Recipients will receive a \$10 gift card to the bookstore and a \$5 Caribou Coffee gift card, along with an award plaque.

Anyone at NDSU (students, staff and faculty) who exhibits one or more of the following valued behaviors is eligible:

- Customer Service
- Continuous Improvement
- Teamwork
- Integrity
- Quality

To nominate someone for a Campus Kudos award follow this link: https://www.ndsu.edu/staff_senate/campus_kudos/

STUDENT SUCCESS SUMMIT

NDSU's **3rd Annual Student Success Summit** will be taking place virtually on **February 17, 8:30am-12pm.**

This event is for faculty and staff to come together and discuss the unique and diverse ideas in relation to helping NDSU students be successful!

The theme this year is "*Supporting Student Growth through Grit and Gratitude*".

Organizers plan to have several breakout sessions and they want to hear from expertise on campus. **Proposals are due by December 1.** If you are interested in presenting, please fill out this [form](#) with information on your presentation. You will be notified in mid-December as to whether your proposal was approved.

If you have any questions, please contact Jessica.M.Bauer@ndsu.edu.

FUNDING OPPORTUNITIES

NSF Infrastructure Programs

The Computer and Information Science and Engineering (CISE) Community Research Infrastructure Program [[NSF 20-610](#)] funds the creation and enhancement of world-class research infrastructure that will specifically support diverse communities of CISE researchers pursuing focused research agendas in computer and information science and engineering. *Letter of Intent Deadline: December 15, 2020*

The Mid-Scale Research Infrastructure (RI) Program [[NSF 21-505](#)] supports the design or implementation of unique and compelling RI projects. Mid-scale RI-1 implementation projects may include any combination of equipment, instrumentation, cyberinfrastructure, broadly used large-scale datasets, and the commissioning and / or personnel needed to successfully complete the project, or the design efforts intended to lead to eventual implementation of a mid-scale class project. *Pre-proposal deadline: January 7, 2021*

NSF: Emerging Frontiers in Research and Innovation 2021

The Emerging Frontiers in Research and Innovation (EFRI) program of the National Science Foundation (NSF) Directorate for Engineering (ENG) serves a critical role in helping ENG focus on important emerging areas in a timely manner. This solicitation [[NSF 20-614](#)] is a funding opportunity for interdisciplinary teams of researchers to embark on rapidly advancing frontiers of fundamental engineering research. For this solicitation, EFRI will consider proposals that aim to investigate emerging frontiers in one of the following two research areas:

- Distributed Chemical Manufacturing (DChem);
- Engineering the Elimination of End-of-Life Plastics (E3P).

This solicitation will be coordinated with the Directorate for Biological Sciences, the Directorate for Mathematical and Physical Sciences and the Directorate for Social, Behavioral and Economic Sciences.

EFRI seeks proposals with potentially transformative ideas that represent an opportunity for a significant shift in fundamental engineering knowledge with a strong potential for long term impact on national needs or a grand challenge. The proposals must also meet the detailed requirements delineated in the solicitation.

Further information about the EFRI program may be obtained by viewing the slides from the FY20 EFRI informational webinar. Please click [here](#) to view the FY20 slides.

Letter of Intent deadline: December 9, 2020

RECENTLY FUNDED GRANTS

- Ravi Kiran Yellavajjala (PI). Integrity of Polyol-Soy Coatings in Aggressive Concrete Environment: Phase-2. \$25,202 from the MN Soybean Research and Promotion Council. 09/01/2020 – 08/31/2021.
- Yan Zhang (PI). Jugular Venous Blood Stasis in Microgravity: An Integrated Study of Pulsatile Flow-Vein-Valve Interaction. \$39,930 from the National Aeronautics and Space Administration. 09/16/2020 – 08/15/2021.
- Yan Zhang (PI). ND EPSCoR STEM Solicitation – Virtual Module for STEM Laboratory Courses Award. \$5,914 from ND EPSCoR. 10/16/2020 – 05/31/2021.
- Yan Zhang (PI). ND EPSCoR STEM Solicitation – Equipment Award. \$35,000 from ND EPSCoR. 10/21/2020 – 05/31/2021.
- Ying Huang (PI), Danling Wang (CPI). New Self-powered IoT Sensors Based on a Novel Multifunctional 2D Ti3C2Tx MXene Nanosheets for Potential Use on Space Probe to Venus. \$40,000 from the National Aeronautics and Space Administration. 09/15/2020 – 08/31/2021.
- Ying Huang (PI). ND EPSCoR STEM Solicitation – Equipment Award. \$35,000 from ND EPSCoR. 10/21/2020 – 05/31/2021.
- Todd Sirotiak (PI). ND EPSCoR STEM Solicitation – Equipment Award. \$34,975 from ND EPSCoR. 10/16/2020 – 05/31/2021.
- Lokesh Narayanan (PI). ND EPSCoR STEM Solicitation – Equipment Award. \$40,000 from ND EPSCoR. 10/16/2020 – 05/31/2021.
- Mijia Yang (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$10,000 from ND EPSCoR. 10/16/2020 – 05/31/2021.
- Ivan Lima (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$10,000 from ND EPSCoR. 10/16/2020 – 05/31/2021.
- Abdulaziz Banawi (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$9,990 from ND EPSCoR. 10/16/2020 – 05/31/2021.
- Beena Ajmera (PI). ND EPSCoR STEM Solicitation – Equipment Award. \$40,000 from ND EPSCoR. 10/16/2020 – 05/31/2021.
- Beena Ajmera (PI). ND EPSCoR STEM Solicitation – Undergraduate Research Award. \$4,989 from ND EPSCoR. 10/21/2020 – 05/31/2021.

- Houjun Yang (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$10,000 from ND EPSCoR. 10/16/2020 – 05/31/2021.
- Houjun Yang (PI). ND EPSCoR STEM Solicitation – Virtual Module for STEM Laboratory Courses Award. \$6,000 from ND EPSCoR. 10/22/2020 – 05/31/2021.
- Danling Wang (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$10,000 from ND EPSCoR. 10/16/2020 – 05/31/2021.
- Danling Wang (PI). ND EPSCoR STEM Solicitation – Equipment Award. \$20,443 from ND EPSCoR. 10/21/2020 – 05/31/2021.
- Qifeng Zhang (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$10,000 from ND EPSCoR. 10/16/2020 – 05/31/2021.
- Qifeng Zhang (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$10,000 from ND EPSCoR. 10/22/2020 – 05/31/2021.
- Syeed Md Iskander (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$10,000 from ND EPSCoR. 10/16/2020 – 05/31/2021.
- Syeed Md Iskander (PI). ND EPSCoR STEM Solicitation – Equipment Award. \$35,000 from ND EPSCoR. 10/21/2020 – 05/31/2021.
- Nita Yodo (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$10,000 from ND EPSCoR. 10/22/2020 – 05/31/2021.
- Wenjie Xia (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$10,000 from ND EPSCoR. 10/22/2020 – 05/31/2021.
- Di Wu (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$10,000 from ND EPSCoR. 10/22/2020 – 05/31/2021.
- Dharmakeerthi Nawarathna (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$10,000 from ND EPSCoR. 10/21/2020 – 05/31/2021.
- Zhibin Lin (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$10,000 from ND EPSCoR. 10/21/2020 – 05/31/2021.
- Trung Bao Le (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$8,000 from ND EPSCoR. 10/21/2020 – 05/31/2021.
- Dali Sun (PI). ND EPSCoR STEM Solicitation – Undergraduate Research Award. \$5,000 from ND EPSCoR. 10/21/2020 – 05/31/2021.
- Jordi Estevadeordal (PI). ND EPSCoR STEM Solicitation – Equipment Award. \$29,950 from ND EPSCoR. 10/21/2020 – 05/31/2021.
- Trung (Tim) Le (PI). ND EPSCoR STEM Solicitation – Equipment Award. \$34,000 from ND EPSCoR. 10/21/2020 – 05/31/2021.
- Jessica Lynne Lattimer Vold (PI). ND EPSCoR STEM Solicitation – Equipment Award. \$35,000 from ND EPSCoR. 10/21/2020 – 05/31/2021.
- Farhad Shirani Chaharsooghi (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$10,000 from ND EPSCoR. 10/22/2020 – 05/31/2021.
- Umamaheswara Tida (PI). ND EPSCoR STEM Solicitation – Seed Award to Collect Preliminary Data. \$10,000 from ND EPSCoR. 10/22/2020 – 05/31/2021.

RECENTLY SUBMITTED PROPOSALS

- Mijia Yang (PI), Zhili Gao (CPI). Improvement of Approach Smoothness on Integral Abutment Bridges. \$120,000 from the SD Department of Transportation. 12/01/2020 – 05/31/2022.
- Jessica Lynne Lattimer Vold (PI). Sustainable Packaging from Agricultural Waste Products. \$150,000 from Johnson and Johnson. 02/02/2021 – 01/31/2024.
- Fardad Azarmi (PI). Additively Manufactured High Temperature Friction Stir Tooling through Thermal Spray Techniques. \$599,683 from the Department of Defense. 10/01/2020 – 09/30/2023.

- Danling Wang (PI). Smell your breath: novel IoT based smart sensing system for rapid detection of airborne virus for disease control and prevention. \$150,000 from Johnson and Johnson. 08/01/2021 – 07/31/2024.

RECENT PUBLICATIONS

For 2020, 149 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, Ankit Kalra, Halis Simsek, Gopalakrishnan Kumar, and Sanjeev Kumar Prajapati. 2020. “Current Trends and Prospects in Microalgae-Based Bioenergy Production.” *Journal of Environmental Chemical Engineering* 8 (5): 104025. <https://doi.org/10.1016/j.jece.2020.104025>.
- Knutson, E. E., A. C. B. Menezes, X. Sun, A. B. P. Fontoura, J. H. Liu, M. L. Bauer, K. R. Maddock-Carlin, K. C. Swanson, and A. K. Ward. 2020. “Effect of Feeding a Low-Vitamin A Diet on Carcass and Production Characteristics of Steers with a High or Low Propensity for Marbling.” *Animal* 14 (11): 2308–14. <https://doi.org/10.1017/S1751731120001135>.
- Kumar, M., P. N. Bajeel, O. P. Yadav, and K. C. Siju. n.d. “Application of Degradation Growth Model in the Estimation of Bayesian System Reliability.” *Communications in Statistics-Simulation and Computation*. <https://doi.org/10.1080/03610918.2020.1828919>.
- Steward, David R. 2020. “Waves in Collections of Circular Shoals and Bathymetric Depressions.” *Journal of Waterway Port Coastal and Ocean Engineering* 146 (4): 04020018. [https://doi.org/10.1061/\(ASCE\)WW.1943-5460.0000570](https://doi.org/10.1061/(ASCE)WW.1943-5460.0000570).

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.

