

COLLEGE HAPPENINGS

June 28, 2022

FROM THE DEAN

Excellence Through Diversity

This week I'm in Minneapolis attending the annual American Society for Engineering Education (ASEE) Annual Conference. After two years of virtual annual ASEE meetings, it is great to be back in person. This is a conference I've been attending annually for most of the past 20 years. The conference offers an opportunity to listen to talks about best practices in engineering education, to network and exchange ideas with other faculty and administrators passionate about the future of the field, and to talk with the many vendors and industry representatives at the exposition.

The theme of this year's conference is "Excellence Through Diversity." It is a timely topic for engineering education, and appropriate for a meeting in Minneapolis, which two years ago became the epicenter of a societal reckoning around systemic racism. Here in the College of Engineering, we've been intentional about identifying inclusivity as one of four core values in our strategic plan, noting we are proactive about diversity, knowing that we are far better together. Three years ago, after preparing our initial diversity, equity, and inclusion plan, we received a Bronze Award from the American Society for Engineering Education Diversity Recognition Program (the highest recognition level at the time). We have been making some progress in educating a more diverse group of College of Engineering students. Over the past decade the number of Black/African American students in the College has nearly doubled (from 42 to 82), the number of Hispanic students more than tripled from 19 to 71, and the percentage of female students in the college increased from under 11% to over 16%. However we saw a decrease in American Indian students from 13 to 9. You can explore this demographic data by filtering for the College of Engineering at the following URL:

https://www.ndsu.edu/oira/dashboards/race_ethnicity/.

More resources for supporting minority students, including Seven Best Teaching Practices to Support Minority Students can be found at https://www.ndsu.edu/coe/faculty_staff/supporting_diversity/.



IN THE NEWS

[Diaries from Abroad](#)

[NDSU environmental engineering student says now is her time 'to finally make an impact'](#)

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

Tuesday, July 19, **DEPSCoR DoD Day presented by the Department of Defense.** Program officers from the Army, Navy, Air Force and other DoD representatives will participate in the meeting. [Register here](#) for this free event at the University of South Dakota.

Friday, August 5. **Summer Undergraduate Research Programs Poster Session.** 10:00 a.m. – 12:00 p.m. at the A. Glenn Hill Center.

Wednesday, August 10, **Academic Leaders Orientation and Retreat for Department Chairs/Heads and Deans.**

Tuesday, August 16, **New Faculty Orientation.** The New Faculty Orientation is intended for faculty that have started at NDSU since last year's conferences. [Register here.](#)

Wednesday, August 17, **Annual Faculty/Academic Staff Conference.** [Register here.](#)

STAFF AWARD NOMINATIONS

We are currently seeking nominations for outstanding staff in the college. This award identifies and honors unusual dedication and exceptional contributions by a staff member in the College of Engineering. The awards are in the amount of \$1000, with individual plaques presented at our annual scholarship and awards reception. You may visit our [website](#) for a list of college awards and previous winners.

Any NDSU staff member, faculty member, or student may submit a nomination. The nomination consists of a letter (two pages or less) describing the nominee's contributions to the success of the College of Engineering.

Please email your nominations to angela.thomassen@ndsu.edu by **Friday, July 15** at 5:00 pm.

2022-23 PROMOTION, TENURE AND EVALUATION

The 2022-23 Faculty Promotion, Tenure, and Evaluation (PTE) Materials are now available to download from the Promotion and Tenure website at: <https://www.ndsu.edu/facultyaffairs/pte/>

This website contains the NDSU PTE Timeline, Guidelines for Promotion and Tenure Portfolio Preparation, Probationary Period Extension Form (per NDSU Policy 352, 3.6), Policy and Procedure Checklist, the Portfolio Cover Sheet, and Information on University-Wide PTE Advisory Committee.

Portfolios are due to the Office of the Provost/Faculty Affairs no later than December 30, 2022. If you have any questions regarding PTE, please contact Canan Bilen-Green (canan.bilen.green@ndsu.edu).

Upcoming information sessions for Fall 2022 PTE candidates:

- Thursday July 28, 10:00-11:00 am, via Zoom
- Wednesday August 31, 1:00-2:00 pm, TBD
- Thursday September 8, 2:00-3:00 pm, TBD

DIVERSITY, EQUITY AND INCLUSION TRAININGS

Cultural Diversity, Microaggressions and Upstander 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. Dates offered will be:

- Module 1 Cultural and Cultural Diversity, October 6 from 9:00 am -11:00 am in the Hidatsa room in the Memorial Union
- Module 2, Redefining Diversity, October 13 from 9:00 am- 11:00 am in the Sahnish room in the Memorial Union
- Module 3, Microaggressions, October 20 from 9:00 am- 11:00 am in the Room of Nations in the Memorial Union
- Module 4, Confronting Bias, October 27 from 9:00 am- 10:30 am in the Sahnish room in the Memorial Union

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

Safe Zone Trainings

The Office of the Vice Provost for Faculty and Equity will be offering the Safe Zone Training series. Dates offered:

- Level 1 “Becoming an Ally”, September 21, 2022 from 1:00-3:00 pm in the Sahnish room
- Level 2 “Gender Identity and Expression”, September 28, 2022 from 1:00-3:00 pm in the Sahnish room
- Level 3 “Upstander”, October 5, 2022 from 1:00-2:30 pm in the Sahnish room

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

FUNDING OPPORTUNITIES

DARPA: Defense Sciences Office BAA

The mission of the Defense Advanced Research Projects Agency (DARPA) Defense Sciences Office (DSO) is to identify and create the next generation of scientific discovery to fuel innovation throughout the Agency and beyond. In support of this mission, the [DSO Office-wide BAA](#) invites proposers to submit innovative basic or applied research concepts or studies and analysis proposals that address one or more of the following technical thrust areas:

1. Novel Materials & Structures,
2. Sensing & Measurement,
3. Computation & Processing,
4. Enabling Operations,
5. Collective Intelligence, and
6. Global Change.

Each of these thrust areas is described in the BAA and includes a list of example research topics that highlight several (but not all) potential areas of interest. Proposals must investigate innovative approaches that enable revolutionary advances. DSO is explicitly not interested in approaches or technologies that primarily result in evolutionary improvements to the existing state of practice.

DOE NOI: Clean Energy Manufacturing Institute

The U.S. Department of Energy (DOE) [announced](#) its intent to issue a funding opportunity that will support the development of a Clean Energy Manufacturing Innovation Institute dedicated to rapidly decreasing emissions across the industrial sector through electrified process heating.

To ensure this newest institute supports clean energy solutions that benefit all Americans, the forthcoming funding opportunity will solicit participation from a diverse group of applicants, partners, and future members. The [notice of](#)

[intent](#) (NOI) includes a Teaming Partner List to help identify a broad and inclusive range of interested individuals and organizations, as well as potential areas of interest for the funding opportunity.

The Office of Energy Efficiency and Renewable Energy (EERE) plans to issue the FOA via [EERE Exchange](#) in summer of 2022. The funding opportunity is expected to include approximately \$70 million of federal funding and require a minimum non-federal cost share of 50% for each project. The estimated period of performance for the award will be five years. EERE envisions awarding a single financial assistance award through a cooperative agreement.

RECENTLY FUNDED GRANTS

- Ravi Kiran Yellavajjala (PI). A Sustainable Air-entraining and Internal Curing Agent. \$60,000 from the Iowa Department of Transportation. 5/16/2022 - 12/15/2022.
- Syeed Md Iskander (PI). Engineering landfill daily covers with agricultural waste-derived biochar for controlling the movement of Per and Polyfluoroalkyl Substances in leachate. \$7,661 from the NDSU Foundation and Alumni Association. 6/1/2022 - 12/31/2022.

RECENTLY SUBMITTED PROPOSALS

- Dali Sun (PI), Wenjie Xia (CPI). Fast Analysis of Protein Structural for Cancer Research. \$1,302,071 from the National Institutes of Health. 4/1/2023 - 4/2/2026.
- Kenneth Hellevang (PI). Evaluating the Allowable Storage Time of Selected Soybean Varieties. \$126,480 from the United Soybean Board. 10/1/2022 - 12/31/2023.
- Kenneth Hellevang (CPI). Healthwise 2022-23: Reaching North Dakotans of All Ages with Cancer Prevention Strategies. \$10,000 from the Centers for Disease Control. 8/1/2022 - 6/30/2023.
- Jeremy A Straub (PI). STTR Sub-Award: A22B-T002: Verification, Validation, Assurance and Trust of Machine Learning Models and Data for Safety-Critical Applications in Armaments Systems. \$54,381 from the U.S. Army. 1/1/2023 - 6/30/2023
- Ademola Monsur Hammed (CPI) Harnessing agricultural microbiomes for sustainable agriculture through the application of a high-throughput automated microbioreactor system. \$483,345 from the National Institute of Food & Agriculture. 9/1/2022 - 8/31/2026.

RECENT PUBLICATIONS

For 2022, 68 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:

- Luo, Wei, Bin Liu, Juan Liu, Tao Wu, Qiang Liu, Meng-Yu Wang, Sheng-Peng Wan, et al. 2022. "Tapered Side-Polished Microfibre Sensor for High Sensitivity HCG Detection." *IEEE Sensors Journal* 22 (8): 7727–33. <https://doi.org/10.1109/JSEN.2022.3156284>.
- Pathak, Harsh, C. Igathinathane, Z. Zhang, D. Archer, and J. Hendrickson. 2022. "A Review of Unmanned Aerial Vehicle-Based Methods for Plant Stand Count Evaluation in Row Crops." *Computers and Electronics in Agriculture* 198 (July): 107064. <https://doi.org/10.1016/j.compag.2022.107064>.
- Stenger, John E., and Harlene M. Hatterman-Valenti. 2022. "Complex Plant Process Trait Evaluation Through Decomposition of Higher-Order Interaction: A Case Study in Acclimation Responses of Cold-Climate Hybrid Grapevine Through Bilinear and Multiway Methods." *Journal of the American Society for Horticultural Science* 147 (3): 161–73. <https://doi.org/10.21273/JASHSO5157-21>.

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.

