

# COLLEGE HAPPENINGS

July 12, 2022

## FROM THE DEAN

Numerous faculty are working hard writing proposals this week as various funding agency deadlines approach, including the NSF CAREER Award deadline later this month. I shared the following message over four years ago in College Happenings, which I am recycling here, hoping to provide some encouragement and perspective.

### Persistence in Proposal Writing

I recently logged into NSF's FastLane system and took a few minutes to view the status of my previous proposals. Talk about depressing. The vast majority of the 30+ proposals I've submitted to NSF over the years were listed as "Declined." There were also a handful of proposals listed as "Awarded," but even some of these successful proposals were funded on the second or third attempt, after multiple revisions from the previous reviewers' comments.

It's easy to get discouraged when such a large percentage of the proposals submitted to federal funding agencies are rejected. Of course, there are many things that you can do to increase your odds – such as writing error free, articulate, and creative proposals; making sure that the proposal topic is a good fit with the solicitation; and getting feedback from peers in the form of mock reviews (of course this requires getting the proposal done early). It's also a good idea to "diversify" your portfolio of funding, by pursuing projects with industry, and from state or other funding sources.

I also think it's necessary to realize that there is a lot of randomness in the review process. Reviewers don't always see things eye to eye. In his book, *The Drunkard's Walk, How Randomness Rules Our Lives*, Leonard Mlodinow describes a manuscript that was written in the 1950's that was rejected by many publishers. Some of the comments from the publishers included:

- "very dull"
- "a dreary record of typical family bickering, petty annoyances and adolescent emotions"
- "Even if the book had come to light five years ago, when the subject [WWII] was timely, I don't see that there would have been a chance for it"

However, Anne Frank's famous life story, *The Diary of a Young Girl*, which was submitted posthumously by a family member, was ultimately published and went on to sell over 30 million copies, becoming one of the best-selling books in history. This type of randomness in the review process is not an isolated misjudgment. For example, John Grisham's manuscript for *A Time to Kill*, was rejected by twenty-six publishers. Theodor Geisel (Dr. Seuss)'s first children's book, *And to Think That I Saw It on Mulberry Street*, was rejected by twenty-seven publishers. And, J. K. Rowling's first *Harry Potter* manuscript was rejected by nine.<sup>[1]</sup> However, what is unique of these successful authors, as well as successful individuals in nearly every field, is that they are people who don't give up.

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<sup>[1]</sup> L. Mlodinow, *The Drunkard's Walk, How Randomness Rules Our Lives*, 2008.

Take the advice colleagues have given me related to proposal writing:

- Get in the game, because if you don't submit a proposal, its chance of getting funded is 0%.
- Prepare early and seek as much feedback as possible.
- Keep your expectations in check, and celebrate your successes.
- Keep writing, there is no silver bullet, but you can improve your odds.

Happy proposal writing!



## IN THE NEWS

[NDSU engineering team earns first place](#)

[First student completes accelerated engineering master's degree](#)

[Faculty member joins NDSU agricultural and biosystems engineering](#)

[NDSU engineering dean named national fellow](#)

## CONGRATULATIONS

**Chau Le**, an assistant professor in the **Department of Civil, Construction and Environmental Engineering**, has been selected as one of the 2022-2023 Challey Institute's Faculty Fellows. Fellows contribute to the Challey Institute mission by educating and training students, engaging in policy-relevant research, and conducting outreach activities to better inform the public about issues related to innovation, trade, and institutions.

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.

Thursday, July 28, **Green Dot training program**. The Green Dot program is focused on giving bystanders the tools to safely intervene when they see warning signs of power based personal violence. 10:00 – 11:30 a.m. in the Memorial Union Nueta room. [Register Here](#).

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](mailto:angela.thomassen@ndsu.edu) by **Friday, July 15** at 5:00 pm.

## 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/](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/](https://www.ndsu.edu/equity/prevention_education/)

## RESEARCH SPACE TOURS

Sharing what you're doing in your research space is a good first step in initiating collaborations outside of your home unit. You are invited to host a lab tour for your NDSU colleagues and Vice President Fitzgerald. Complete this [short questionnaire](#) to begin the process.

## FUNDING OPPORTUNITIES

### NDSU Foundation Impact Fund

The NDSU Foundation Grants Committee is accepting applications for the 2022 Impact Fund Grant Program. The application deadline is Tuesday, August 2, 2022, by 4:30 p.m.

The NDSU 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.

The application form, and additional information about the NDSU Impact Fund Grant Program, can be found at the NDSU Foundation website: <https://www.ndsufoundation.com/impact-fund>

For any further questions, please email Janna Swanson, Grants Committee Liaison, at [janna.swanson@ndsufoundation.com](mailto:janna.swanson@ndsufoundation.com).

## **DOE: Decarbonization of Industry**

The Department of Energy (DOE) announced its intent to issue a funding opportunity announcement (FOA) that will support DOE's efforts to decarbonize the American industrial sector and move the U.S. toward net-zero carbon emissions.

The "Industrial Efficiency and Decarbonization FOA" is expected to include the following topics, applying the four industrial decarbonization pathways to energy-intensive American industries where decarbonization technologies could have the greatest impact:

- Decarbonizing Chemicals: This topic will focus on unit operations, including advanced separations and advanced reactors, and alternative production and process heating technologies to reduce carbon impacts from the production of high-volume chemicals.
- Decarbonizing Iron and Steel: This topic will focus on advancements that enable decarbonization in ore-based or scrap-based iron and steelmaking operations, and that convert other existing iron and steelmaking ancillary and thermal processes to use clean fuels or electricity.
- Decarbonizing Food and Beverage Products: This topic will focus on innovative technologies that decarbonize process heating operations within the food and beverage sector.
- Decarbonizing Cement and Concrete: This topic will focus on next generation cement formulations and process routes, utilization of low carbon fuels, and carbon capture technologies.
- Decarbonizing Paper and Forest Products: This topic will focus on novel paper and wood drying technologies, and innovative pulping and paper forming technologies.
- Cross-sector Decarbonization Technologies: This topic will focus on innovations in low temperature waste heat to power, thermal energy storage, and industrial heat pump technologies.

DOE's Advanced Manufacturing Office plans to issue the FOA via [EERE Exchange](#) in August 2022. EERE envisions awarding multiple financial assistance awards in the form of cooperative agreements. The estimated period of performance for each award will be approximately 24-36 months. For more information about this NOI, visit the [Advanced Manufacturing Office website](#).

## **RECENTLY FUNDED GRANTS**

- Dharmakeerthi Nawarathna (PI), Umamaheswara Rao Tida (CPI). PFI-TT: Point-of-care sensor based on electric fields and machine learning for detection of circulating microRNA to identify early pancreatic cancer. \$250,000 from the National Science Foundation. 6/15/2022 - 5/31/2024.
- Yu Zhang (PI). Distinguishing herbicide resistant (Glufosinate, Glyphosate, PPO inhibitors and Dicamba) kochia in sugar beet field using deep learning algorithm and hyperspectral technology. \$2,918 from the Sugarbeet Res. & Edu. Board of MN & ND. 4/1/2022 - 3/31/2023.

## RECENTLY SUBMITTED PROPOSALS

- Jordi Estevadeordal (PI). Integrating Advanced Measurement Techniques to Monitor and Mitigate Environmental Factors in Storage Systems to Reduce Postharvest Losses of Perishable Crops. \$10,370 from the Agricultural Research Service. 8/1/2022 - 7/31/2023.
- Danling Wang (PI). Collaborative Research: A Sensing Platform for Explosives Detection Based on a New Nanocomposite and Novel MEMS Transduction Techniques. \$308,560 from the National Science Foundation. 1/1/2023 - 12/31/2025.
- Danling Wang (CPI). Characterization and Test of Novel Sensor Materials for In-situ Resource Utilization in NASA Missions. \$45,000 from the National Aeronautics and Space Administration. 8/16/2022 - 8/15/2023.
- Dali Sun (CPI). Integrin trans regulation and tumor microenvironment. \$145,000 from the National Institutes of Health. 4/1/2023 - 3/31/2025.
- Changhui Yan (CPI). Increasing the Efficiency of Selecting High-Quality Soybeans for Tofu Processors and Breeders with Machine Learning. \$91,428 from the MN Soybean Research & Promotion Council. 9/1/2022 - 8/31/2023.

## RECENT PUBLICATIONS

For 2022, 71 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:

- Ahmadi, Mostafa, Farhad Panahi, Naeimeh Bahri-Laleh, Mohammad Sabzi, Gerard Pareras, Bruno N. Falcone, and Albert Poater. n.d. "PH-Responsive Gelation in Metallo-Supramolecular Polymers Based on the Protic Pyridinedicarboxamide Ligand." *Chemistry of Materials*. Accessed July 7, 2022.  
<https://doi.org/10.1021/acs.chemmater.2c01346>.
- DeNio, Joshua Aaron, and Simone A. Ludwig. 2021. "Improving Transaction Speed and Scalability in Blockchain Systems." In *2021 IEEE International Conference on Big Data (Big Data)*, edited by Y. Chen, H. Ludwig, Y. Tu, U. Fayyad, X. Zhu, X. Hu, S. Byna, et al., 3619–28. New York: IEEE.  
<https://doi.org/10.1109/BigData52589.2021.9671648>.
- Nitta, Yusaku, Mitchell Borders, and Simone A. Ludwig. 2021. "Analysis of Gene Expression Cancer Data Set: Classification of TCGA Pan-Cancer HiSeq Data." In *2021 IEEE International Conference on Big Data (Big Data)*, edited by Y. Chen, H. Ludwig, Y. Tu, U. Fayyad, X. Zhu, X. Hu, S. Byna, et al., 4745–52. New York: IEEE.  
<https://doi.org/10.1109/BigData52589.2021.9671793>.

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](mailto:kyle.bosch@ndsu.edu) to submit items for *College Happenings*.

Follow the College of Engineering on social media.

