

# COLLEGE HAPPENINGS

September 15, 2020

## FROM THE DEAN

### Guiding Principles

Recently I heard from a staff member about their difficulty in juggling and prioritizing multiple tasks, especially in this period of HyFlex teaching and its associated added responsibilities. I expect many of you can relate. Our work lives are full of decisions, and it is often the small decisions made by individual faculty and staff that make big differences in the direction of our programs. Which task do I do first, and what can be left until later? Should I make a phone call, or send an e-mail? Is it time to update an experiment or should it be rethought from the beginning? Have I prepared adequately for my HyFlex lecture, or should I go over it one more time?

Since everyone here makes decisions impacting our college, departments, and programs, I want you all to recognize that you are doing it with a surprising frequency, and I want you to have a simple rationale for making each simple everyday decision. The same principle applies to the more momentous decisions that we get to make, too, but if we all use the same guiding principles, the college will be more effective in fulfilling its mission of educating innovative problem solvers and creating new knowledge to improve lives in North Dakota and beyond.

OK, so what are the great guiding principles? Just this—for every choice that you face, ask two simple questions: (1) “Does this advance the college’s educational mission?” and (2) “Does this make the college’s research go forward?”. These two questions lie at the heart of our dual charges as a land grant engineering school: education and research.

If everybody would consider their decisions and interactions in light of the questions “Does this advance the College of Engineering’s educational mission?” and “Does this make the College of Engineering’s research go forward?” imagine how much more we could accomplish.



## IN THE NEWS

[NDSU student team wins Disruptive Innovation Challenge](#)

[NDSU has ‘an incredible amount of resources for entrepreneurship’](#)

## CONGRATULATIONS

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

### Zoom

1. **Make sure you and your students are using your NDSU Zoom accounts.** These accounts have default security settings to keep your meetings more secure. *Log in through <https://ndsu.zoom.us> using your NDSU credentials, or sign in through the Zoom app with Single-Sign-On (SSO).*
2. We are seeing several common issues with Zoom, especially around how instructors and students are logging in or authenticating.
  - ***Preassigned breakout rooms aren't working***
  - ***Students aren't able to see Zoom recordings in Blackboard***
  - ***Students can't see upcoming Zoom meetings in Blackboard***
    - For all of these, students must be signed in to Zoom with their NDSU accounts so they are authenticated. Joining through Blackboard alone will not authenticate. Be sure to sign in to Blackboard at <https://blackboard.ndus.edu>, rather than bookmarks or links from other campuses.
3. If students are struggling to connect to your class with Zoom:
  - Have student authenticate with NDSU credentials in Zoom app before opening Blackboard
  - If the student still can't get in, have them call the Help Desk to troubleshoot, but in the meantime send them a direct link to your Zoom meeting, rather than connecting through Blackboard

### Updated Classroom Instructions

- We have updated documentation on how to get your class going if you're having issues with cameras, document cameras, microphones or speakers in your class or for your remote participants. Please visit: <https://kb.ndsu.edu/105163>

### Support for Instructors

If you have any technical issues or need help, please contact our IT Help Desk at 701-231-8685 or [ndsuhelpdesk@ndsu.edu](mailto:ndsuhelpdesk@ndsu.edu). We have staff and student employees available to assist folks in the classrooms and on the phone.

### Upcoming Open Forums

Faculty, staff and other instructors can join the weekly open forums with IT to discuss fall instruction.

- Thursday, September 17, 3:00 p.m.,  
<https://ndsu.zoom.us/j/99982361026?pwd=MHM0aUxEeWhQSVFrRW9hYXA5ZzlUUT09> Meeting ID: 999 8236 1026, Passcode: 869450

## UPCOMING EVENTS

Wednesday, September 23, **College of Engineering Faculty and Staff Awards Presentation.** 3:00 p.m. via Zoom. A link for the meeting will be sent out via email.

Thursday, September 24, **Search Committee Training – Searching for Excellence.** Anyone who plans to be a chair of an academic search is required to attend the training within three years prior to your position being posted. The

training is also open and recommended to any and all search committee members. 10:00 a.m. – 12:00 p.m. via Zoom. Register here: [https://www.ndsu.edu/provost/administrative\\_units/facultyaffairs/faculty\\_recruitment/](https://www.ndsu.edu/provost/administrative_units/facultyaffairs/faculty_recruitment/)

Wednesday, September 30, **Learning the Language of Diversity and Meaningful Inclusion**. Former Minnesota Supreme Court Justice Alan C. Page will discuss his experiences, especially those related to students of Color and post-secondary education. 12:00 p.m. via Zoom. **Zoom meeting ID:** 986 1545 9587. **Password:** 111243

## PROPOSAL DEVELOPMENT PROGRAM

### COMPLETE AND COMPLIANT PROPOSALS TO NSF

Wednesday, September 23, 2020 | 12:00 – 1:00 p.m.

Learn about all the changes NSF has made to the proposal guidelines this year and the basics of determining what is required for a complete and compliant proposal. Topics covered will include:

- What to look for in solicitation requirements.
- How the Proposal and Award Policies and Procedures Guide (PAPPG) fits in.
- The new requirements for Biographical Sketch and Current and Pending templates.

Presenters: Sheri Anderson and Cassie Johnson, Research Development Office

[\*\*Register for this session >>\*\*](#)

### NSF EPSCoR RESEARCH INFRASTRUCTURE IMPROVEMENT PROGRAM: TRACK-2 FOCUSED EPSCoR COLLABORATIONS

Wednesday, September 30, 2020 | 12:00 – 1:00 p.m.

The Established Program to Stimulate Competitive Research (EPSCoR) [\*\*RII Track-2\*\*](#) builds interjurisdictional collaborative teams of EPSCoR investigators in scientific focus areas consistent with NSF priorities. Central to the success of a proposal is the clear demonstration that the collaboration is well-positioned to produce outcomes that cannot be obtained through the efforts of a team in a single jurisdiction working alone. Proposals must clearly identify the roles and contributions of each partner in the project, the anticipated increases in research capacity and competitiveness, the projected workforce development and educational plan and outcomes, and the benefits to the jurisdictions, nation, and society.

This session will include an overview of the program, followed by discussion, tips, and Q&A for developing a Track-2 proposal.

Presenter: Julia Bowsher, Ph.D. Associate Professor, Biological Sciences

[\*\*Register for this session >>\*\*](#)

## NDSU LEADERSHIP DEVELOPMENT PROGRAM

Due to the COVID-19 pandemic, this semester's programing will be in the form of an online book review of *The 360° Leader* by John C. Maxwell. This book focuses on how to develop your influence from anywhere in the organization. You can learn to lead up, lead across and lead down. By helping others, you will help yourself. You don't have to be the main leader to have a significant impact on your organization.

If you are interested in participating in this online book review please reach out to [\*\*kristina.astrup@ndsu.edu\*\*](mailto:kristina.astrup@ndsu.edu). They will provide each participant with a book along with an executive book summary. The group will be meeting virtually through Zoom every few weeks for about an hour each time. During the sessions, they will discuss the reading and what steps you are taking to become a 360-Degree Leader.

## COMMUNITY OF RESPECT TRAINING

The objective of the Community of Respect seminar is 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.

**Module 1: Cultural and Cultural Diversity** - September 21 from 10:00 am - noon

**Module 2: Redefining Diversity** - September 28 from 10:00 am - noon

**Module 3: Microaggressions** - October 5 from 10:00 am - noon

**Module 4: Confronting Bias** - October 12 from 10 - 11:30 am

Register at the following Link: [https://www.ndsu.edu/equity/education\\_and\\_training/](https://www.ndsu.edu/equity/education_and_training/)

## REGISTRATION AND RECORDS ADDS ONLINE FORMS

The Office of Registration and Records would like to inform you that the following hard copy forms have been transitioned to online forms.

- Class Permit (signatures and workflow built in via form and email)
- Substitute/Waive a Course (signatures and workflow built in via form and email)
- Grade Reporting
- Incomplete Grade Reporting

These forms can be found at [www.ndsu.edu/registrar/forms](http://www.ndsu.edu/registrar/forms) and *do* require NDUS login credentials. If questions arise, please reach out [ndsu.registrar@ndsu.edu](mailto:ndsu.registrar@ndsu.edu) or 231-7981.

## FUNDING OPPORTUNITIES

### ND EPSCoR Funding Opportunities

ND EPSCoR is accepting proposals to fund STEM activities across seven broad categories:

- Equipment
- Equipment Repairs
- Undergraduate Research
- Seed Awards for collection of preliminary data.
- Seed Awards for faculty and students engaged in K-12 Outreach.
- External Proposal Reviews
- Development of online/virtual models for STEM laboratory courses.

More information and application instructions are posted on the [ND EPSCoR website](#).

### NETL: Faculty Research Program

The [Faculty Research Program](#) offers qualified academic faculty an opportunity to collaborate with National Energy Technology Laboratory (NETL) principal investigators on research that is mutually beneficial to NETL and the participant at state-of-the-art NETL facilities. While typical appointments are part-time, some appointments are offered during the

summer and as a sabbatical. Prior to the appointment, the NETL principal investigator and participant will define the scope of research and schedule the appointment period.

#### Research and Development Areas:

- Carbon Management
- Chemical Reaction Engineering
- Combustion Science
- Computational Research
- Environmental Science
- Fuel Cell Research
- Geosciences
- High Temperature/High Pressure Science
- Materials Performance
- Methane Hydrates Research
- Process Development
- Reciprocating Engines Research
- Remote Sensing
- Sensors and Controls
- Separations Science
- Surface Science

*Applications are accepted on a rolling basis.*

#### **NSF: National Artificial Intelligence (AI) Research Institutes - Limited Submission**

**[Notify RCA](#) by 9/23/2020, 5:00 p.m. if you are interested in submitting to this program.**

The National AI Research Institutes program [[NSF 20-604](#)] – a joint effort of NSF, USDA-NIFA, DHS S&T, DOT FHWA, and several industry partners – will fund Institutes comprising scientists, engineers, and educators united by a common focus on advancing the research frontiers in AI. AI Research Institutes will have as their primary focus the advancement of multidisciplinary, multi-stakeholder research on larger-scale, longer-time-horizon challenges in AI research than are supported in typical research grants. They will accelerate the development of transformational technologies by grounding that research in critical application sectors that can serve as motivation for foundational research advances and provide opportunities for the effective fielding of AI-powered innovation.

In this round of Institutes, proposals are being solicited in the following high-priority areas:

1. Human-AI Interaction and Collaboration;
2. AI Institute for Advances in Optimization;
3. AI and Advanced Cyberinfrastructure;
4. Advances in AI and Computer and Network Systems;
5. AI Institute in Dynamic Systems;
6. AI-Augmented Learning;
7. AI to Advance Biology; and
8. AI-Driven Innovation in Agriculture and the Food System.

#### **RECENTLY FUNDED GRANTS**

- Nita Yodo (PI), David Grewell (CPI). Cost Effective Soy-Based Garden Pots. \$65,192 from the ND Soybean Council. 07/01/2020 – 06/30/2021.

- David Grewell (PI), Nita Yodo (CPI), Chad A Ulven (CPI). Rumen Roughage Replacement for Ruminant Species Based on Wet milling Co-Products. \$375,728 from Cargill Inc. 03/01/2020 – 02/28/2022.
- Yao Yu (PI), Huojun Yang (CPI). Building energy analysis and audit of A. Glenn Hill Center at North Dakota State University. \$43,201 from the ND Department of Commerce. 07/01/2020 – 06/30/2021.
- Jessica Lynne Lattimer Vold (PI). M2M X-Hab 2021 Academic Innovation Challenge Pathbuilder Project. \$31,647 from the National Aeronautics and Space Administration. 08/01/2020 – 05/31/2021.
- Trung Bao Le (PI). Auto-reconstruction of Inundation map using Deep Learning: Benchmarking with UDAR data. \$7,000 from the Earth Science Information Partners. 12/01/2020 – 05/15/2021.
- Kelly Ann Rusch (PI). NASA EPSCoR FY21. \$85,500 from the University of North Dakota. 07/01/2020 – 06/30/2021.
- Dean D Steele (PI), Thomas Scherer (CPI), Xinhua Jia (CPI). Building NRCS Technical Capacity in Irrigation Water Management for Variable Rate Irrigation – 2. \$163,311 from the Natural Resources Conservation Service. 09/01/2020 – 08/31/2023.

## RECENTLY SUBMITTED PROPOSALS

- Zhibin Lin (PI), Qifeng Zhang (CPI), Danling Wang (CPI). REU Site: Bringing nano-functionalized smart materials and devices in American Indian Undergraduate Education for American Indian health improvement and energy efficient building. \$338,795 from the National Science Foundation. 09/01/2021 – 08/31/2024.
- Zhibin Lin (PI), Qifeng Zhang (CPI), Danling Wang (CPI). Development of cost-effective wearable sensor for early-aged detection of COVID-19 cases to improve safety of highway construction sites. \$150,000 from the Department of Transportation. 05/16/2021 – 05/15/2022.
- Fardad Azarmi (PI). Flexible District Energy System with Multiple Renewable Energy Source. \$184,184 from the University of Idaho. 01/01/2021 – 12/31/2023.
- Ying Huang (PI). Understanding the impact of partially autonomous vehicles on Minnesota roads. \$199,085 from the MN Department of Transportation. 02/15/2021 – 02/15/2023.
- Mijia Yang (PI), Yao Yu (CPI), Eric Asa (CPI). Identifying Deer-Vehicle Collision Concentrations in Minnesota. \$147,814 from the MN Department of Transportation. 07/01/2021 – 06/30/2023.
- Xiangfa Wu (PI), Qifeng Zhang (CPI), Adam Curtis Gladen (CPI). Advanced membrane electrode assemblies for fuel cells. \$842,797 from the Department of Defense. 01/01/2021 – 12/31/2023.

## RECENT PUBLICATIONS

For 2020, 128 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:

- Keramati, Amin, Pan Lu, Amirfarrokh Iranitalab, Danguang Pan, and Ying Huang. 2020. "A Crash Severity Analysis at Highway-Rail Grade Crossings: The Random Survival Forest Method." *Accident Analysis and Prevention* 144 (September): 105683. <https://doi.org/10.1016/j.aap.2020.105683>.
- Yang, Xinyi, Liuqing Hu, Hafiz Usman Ahmed, Raj Bridgelall, and Ying Huang. n.d. "Calibration of Smartphone Sensors to Evaluate the Ride Quality of Paved and Unpaved Roads." *International Journal of Pavement Engineering*. <https://doi.org/10.1080/10298436.2020.1809659>.
- Yin, Guanyi, Zhulu Lin, Xilong Jiang, Jin Sun, and Menglong Qiu. 2020. "Holistic Identification and Assessment of Environmental Risks of Arable Land Use in Two Grain Producing Areas of China." *Ecosystem Health and Sustainability* 6 (1): 1784043. <https://doi.org/10.1080/20964129.2020.1784043>.

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.

