

# COLLEGE HAPPENINGS

November 10, 2020

## FROM THE DEAN

### **Pandemic Burn out**

Even in normal times, burnout is a problem in academia. However, as described in a [recent article in the Chronicle of Higher Education](#), the demands of teaching, working, and juggling childcare or other responsibilities in the pandemic have many faculty and staff feeling overwhelmed and under-supported. As referenced in the article, in a forthcoming survey of over one thousand faculty members across the country, more than two-thirds said they had felt “very” or “extremely” stressed or fatigued in the past month.

Those results echo the results of our own survey of over 200 NDSU instructors administered a few weeks ago, which found nearly 70% of responders listed their current mental health as worse than at this time last year, and that mental distress is effecting their work. That survey revealed the most common teaching-related challenges to be (1) managing HyFlex or remote teaching technologies, (2) reduced student participation, and (3) adapting course assignments. In addition, the three most common research-related challenges were reported as (1) limited time available (because of extra time on teaching), (2) difficulty focusing due to cognitive overload/anxiety, and (3) screen fatigue (too much time spent online for meetings and/or classes).

Yesterday, we got some good news about early results from [Pfizer’s coronavirus vaccine trial being more than 90% effective](#), and other promising vaccine announcements are expected. However, we also know that we still have a long road ahead before things return to normal. And I also know that many of you are exhausted. One piece of advice, when you experience the impulse to hold yourself to unrealistically high expectations about your performance, especially at the expense of your physical or mental health, give yourself a break. Give yourself permission to consciously be released from the burden of perfectionism. Considering everything happening in the world around us, it is appropriate to have lower expectations than you would have in a traditional semester.



## IN THE NEWS

[Prairie Business Magazine Cover Story](#)

[Student team wins construction management competition](#)

[NDSU faculty member wins international landslide research award](#)

[Women in Engineering – Kim Heinle Nelson](#)

## CONGRATULATIONS

**Beena Ajmera**, assistant professor of civil and environmental engineering, has been selected as the inaugural recipient of the **Oldrich Hungr Award from the International Consortium on Landslides**.

A team of students from the **Department of Construction Management and Engineering** won 1<sup>st</sup> Place in the Construction 1 division at the North Central Region of the Associated Schools of Construction virtual student competition.

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

### Upcoming Spring Instruction Open Forums

Faculty, staff and other instructors can join the weekly open forums with IT to discuss spring instruction. Please plan to attend if you have any issues with technology in the classrooms.

- Monday, November 16, 1:00 p.m. – Dr. Carrie Anne Platt will discuss HyFlex Experience, <https://ndsu.zoom.us/j/98471360920?pwd=SDdLczAwNmdDZzB5SytWWlIWb2t3QT09>
- Wednesday, December 2, 1:00 p.m. – Student panel on Fall semester experience, <https://ndsu.zoom.us/j/92952846331?pwd=b0wwd25QZ0J5eDQxVmF3dWsrWkplZz09>
- Wednesday, December 16, 9:00 a.m. – Dr. Beena Ajmera will discuss HyFlex Experience, <https://ndsu.zoom.us/j/98480751985?pwd=QTlJSUlteFpIcjlGNHgrWGIzWjBxZz09>

### Extra lapel mics and styluses

If you need another lapel microphone or stylus, instructors can go to the IT Help Desk and pick up an extra on a first-come, first-served basis, one available per person. The IT Help Desk is in Quentin Burdick Building, Room 150.

## UPCOMING EVENTS

Thursday, November 19, Research Series on Engaged Citizenship and Inclusion: **Dr. William Nganje**, presenting on **Health Uninsurance in Rural America**. 3:00 p.m. via Zoom.

Monday, November 23, Faculty Virtual Luncheon: Supporting Students with Disabilities. 11:30 a.m. – 1:00 p.m. via Zoom. [REGISTER NOW](#). Those who register by 11/18 have the option to pick a box lunch from MU prior to the presentation.

Tuesday, December 1, **NDSU Giving Day**. Giving Day is 24 hours of online, grassroots fundraising to support NDSU. [Learn more](#).

Wednesday, December 2, Proposal Development Virtual Program. **Writing a Good First Page and Project Summary** presented by Christine Strohm. Noon via Zoom. [Register here](#).

## COE RESEARCHERS FEATURED ON LIST OF WORLD'S TOP CITED SCIENTISTS

Several College of Engineering faculty members are included among the top scientists in the world on a list released by Stanford University. Originally published in 2019, the rankings were updated in October, 2020 and show career-long citation impact through the end of 2019. The list utilizes algorithms that strive to quantify and systematically rank individuals into consistent scientific fields:

COE researchers and their scientific field on the list include:

- Michael R. Kessler, Polymers
- Kalpana S. Katti, Materials
- Qifeng Zhang, Nanoscience & Nanotechnology
- Ghodrat Karami , Mechanical Engineering and Transports
- Sumathy Krishnan, Energy
- Jeremy Straub, Optoelectronics & Photonics

The list is compiled from a set of metrics including total citations; the Hirsch h-index (which quantifies the cumulative impact of a scholar's work) and the co-authorship-adjusted Schreiber hm-index; the number of citations to papers as a single author; the number of citations to papers as single or first author; and the number of citations to papers as single, first, or last author.

The updated study was published in PLOS Biology in October, 2020:

<https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3000918>.

## ALLY FOR BLACKBOARD

As announced by the Provost's Office, NDSU is implementing a new digital accessibility tool within Blackboard called Ally. Ally will be turned on in all Blackboard courses on December 23. Instructors do not need to do anything to enroll—you'll see the accessibility gauges on your course content on that date.

### What does Ally do?

- Evaluates content in Blackboard courses to identify how accessible the content is.
- Provides specific instructions for making your content more accessible.
- Generates alternative formats of that content for all varieties of learners (including audio files to listen to, or web files to view on mobile devices)
- More information at: [https://help.blackboard.com/Ally/Ally\\_for\\_LMS/Instructor/Quick\\_Start](https://help.blackboard.com/Ally/Ally_for_LMS/Instructor/Quick_Start)

### Benefits

- Ally automatically generates alternative formats for students. Content that is uploaded which is not accessible generates alternative formats that are also not accessible.
- Your students will benefit from having their content available in many different formats that will meet their learning preferences (without you doing any extra work!).
- The NDSU campus community will benefit by learning from your experience as we create a support model and a more inclusive student experience.

### Support for Instructors

- IT and Disability Services will provide resources for content remediation
- Training:
  - Wednesday, November 18, 1:00 – 3:00 p.m. - [Pre-registration required](#), registration limited
  - More trainings being scheduled in the coming months

## FUNDING OPPORTUNITIES

### [ND ACES Track-1 Emerging Area Seed Awards](#)

The 2020-2025 ND EPSCoR National Science Foundation (NSF) Research Infrastructure Improvement (RII) Track-1 cooperative agreement, *New Discoveries in the Advanced Interface of Computation, Engineering, and Science (ND-*

ACES), has a mission to contribute to cancer research in ways that have state, national, and international ramifications and underpin sustainable activities for a trained and diverse workforce and informed populace and lead to future (beyond the scope of this project) efforts focused on new therapeutic solutions. To accomplish this, faculty from institutions across the state are participating in the Center for Cellular Biointerfaces in Science and Engineering (CCBSE).

The ND-ACES team recognizes several areas of spin-off and emerging research that may expand the reach and capacity of ND-ACES and increase the opportunity for sustainability. Thus, the Track-1 has a pool of funds available each year to support seed awards focused on high-risk, high-impact emerging areas or gaps in the current biosciences research. The RFP lists the following seven areas of interest:

- Imaging Techniques for Cell Growth in Testbeds,
- Inclusion of Additional Cell Types and Fluid Flow Conditions in Testbeds,
- Innovation Pilot Funding and Translational Seed Research that Fit the CCBSE Mission,
- New and Efficient Computational Techniques for Evaluation of Cancer Progression and Biology,
- Multimedia Art Modules for Explaining CCBSE Science,
- New Biomaterials in Tissue Engineering and Advanced Manufacturing of Biomaterials, and
- Novel Biobased Specialty Crop Extracts for Anticancer Therapy Applications.

*Deadline: November 16, 2020; Noon*

### **NSF: Mid-Career Advancement**

The Mid-Career Advancement (MCA) program [NSF 21-516] offers an opportunity for scientists and engineers at the Associate Professor rank (or equivalent) to substantively enhance and advance their research program through synergistic and mutually beneficial partnerships, typically at an institution other than their home institution. Projects that envision new insights on existing problems or identify new but related problems previously inaccessible without new methodology or expertise from other fields are encouraged.

PIs are encouraged to discuss the suitability of their MCA proposal with a program officer from the appropriate directorate (see [https://www.nsf.gov/bio/MCA\\_contacts.jsp](https://www.nsf.gov/bio/MCA_contacts.jsp)).

*Deadline: February 1, 2021*

### **RECENTLY SUBMITTED PROPOSALS**

- Achintya Bezbaruah (PI). Recruiting Students and Early Career Researchers as Participants in the Ninth Nano Conference 2020. \$10,000 from the National Science Foundation. 11/01/2020 – 10/31/2021.
- Danling Wang (PI). Novel non-invasive, rapid, smart sensor for diabetes. \$28,785 from Omnia LLC. 02/01/2020 – 01/31/2022.
- Simone Ludwig (PI), Joseph Bartlett Latimer (CPI), Muhammad Z Malik (CPI), Pretap Kotala (CPI), Jeremy A Straub (CPI). GenCyber Camp at NDSU - Programming, Security, Robotics and AI. \$63,653 from the National Security Agency. 05/01/2021 – 04/30/2022.
- Umamaheswara Rao Tida (PI). CRII: SHF: Enabling Metal Inter-Layer Via Device Utilization for On-chip Memory in Monolithic Three-Dimensional Integrated Circuits. \$174,984 from the National Science Foundation. 06/01/2021 – 05/31/2023.
- Lu Liu (PI). CRII: III: A Multi-level Framework for Measuring the Reproducibility of Hi-C Data. \$175,000 from the National Science Foundation. 09/30/2021 – 08/31/2023.

## RECENT PUBLICATIONS

For 2020, 153 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:

- Azarmi, Fardad, and Igor Sevostianov. 2020. "Evaluation of the Residual Stresses in Metallic Materials Produced by Additive Manufacturing Technology: Effect of Microstructure." *Current Opinion in Chemical Engineering* 28 (June): 21–27. <https://doi.org/10.1016/j.coche.2019.12.004>.
- Carlson, Bailey, Al Habib Ullah, and Jordi Estevadeordal. 2020. "Experimental Investigation of Vortex-Tube Streamwise-Vorticity Characteristics and Interaction Effects with a Finite-Aspect-Ratio Wing." *Fluids* 5 (3): 122. <https://doi.org/10.3390/fluids5030122>.
- Li, Zhaofan, and Wenjie Xia. 2020. "Coarse-Grained Modeling of Nanocellulose Network towards Understanding the Mechanical Performance." *Extreme Mechanics Letters* 40 (October): 100942. <https://doi.org/10.1016/j.eml.2020.100942>.
- Quirino, Rafael L., Khristal Monroe, Carl H. Fleischer, Eletria Biswas, and Michael R. Kessler. n.d. "Thermosetting Polymers from Renewable Sources." *Polymer International*. <https://doi.org/10.1002/pi.6132>.

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.

