

COLLEGE HAPPENINGS

September 5, 2023

IN THE NEWS

[‘There’s so much you can do’](#)

[NDSU Students Receive Grant Money From EPA](#)

[Computer science students conduct summer research](#)

[NDSU hosts advanced cybersecurity camp for high school students](#)

CONGRATULATIONS

Biraj Saha, a graduate student in the Department of Civil, Construction and Environmental Engineering, was awarded the **Environmental Research and Education Foundation 2023 scholarship**. Saha plans to use the money to conduct research on PFAS in compost.

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, September 19, **ADVANCE Midwest Partnership: Validity and fairness in promotion and tenure**. This discussion will be inclusive of all members of the community: undergraduate and graduate students, staff and faculty. 12:00 p.m. [Register Here](#).

Thursday, September 28, **Scholarship and Awards Reception**. Join the College of Engineering as we acknowledge our scholarship recipients and donors, and recognize the accomplishments of outstanding faculty and staff. 3:00 - 4:30 p.m. Memorial Union Oćefi Őakowiŋ Ballroom. There is no cost to attend, but please [RSVP by September 21](#).

Thursday, October 26, **KFI Engineers Professor of Energy Stewardship Ceremony**. Please join us for a ceremony honoring Dr. Adam Gladden. 3:00 p.m. in the NDSU McGovern Alumni Center.

NDSU HOMECOMING

Please mark your calendars for [NDSU Homecoming 2023](#). You are invited to participate in the activities planned for the week of Sept. 25 – 30. NDSU [Homecoming](#) celebrates our academics and athletics in a great community. Major events are listed below. Visit the [Homecoming](#) webpage for the full list.

MONDAY, SEPTEMBER 25

1 – 3 p.m.

Ice Cream Social and Pep Fest

West of Memorial Union

TUESDAY, SEPTEMBER 26

10 a.m. – 6 p.m.

Serve with the Herd

THURSDAY, SEPTEMBER 28

7:30 p.m.

Blue Key Homecoming Show and Coronation

Festival Concert Hall

\$10 admission or free with NDSU student ID.

FRIDAY, SEPTEMBER 29

10 a.m.

President David Cook's State of the University

Address

Festival Concert Hall

FRIDAY, SEPTEMBER 29 (cont.)

4:30 – 8 p.m.

Bison Bash

Churchill Field

Kick off Homecoming weekend with inflatable games, a DJ, food trucks and activities for the whole family at the Bison Bash.

5:30 p.m.

Homecoming Parade

NDSU's Main Campus

Route begins on the corner of University and 17th Ave. N. See the [Homecoming Parade page](#) for more details.

SATURDAY, SEPTEMBER 30

1 p.m.

Bison football vs. South Dakota

Fargodome

6 p.m.

Bison volleyball vs. Omaha

Bentson Bunker Fieldhouse

INCLUDING U

As Fall Semester has begun, NDSU is also ready to begin another year of Including U discussions around topics on diverse experiences and identities in higher education.

All sessions are from 12:00 to 1:00 p.m. and will again be offered via [Zoom](#) to allow greater participation. Sessions are not recorded.

The first session will be:

International Perspectives

Friday, September 15th at Noon

Additional Upcoming Including U Discussions

October 11: Indigenous Perspectives

November 8: Veteran Perspectives

December 12: Campus Faiths

January 10: TBD

February 14: Black Lives on Campus

March 13: Gendered Realities

April 10: Being LGBTQ on Campus

May 8: TBD

FUNDING OPPORTUNITIES

NSF: Research Experiences for Teachers in Engineering and Computer Science

The Research Experiences for Teachers (RET) in Engineering and Computer Science program [[NSF 21-606](#)] supports authentic summer research experiences for K-14 educators to foster long-term collaborations between universities, community colleges, school districts, and industry partners. With this solicitation, the Directorates for Engineering (ENG) and Computer and Information Science and Engineering (CISE) focus on a reciprocal exchange of expertise between K-14 educators and research faculty and (when applicable) industry mentors. K-14 educators will enhance their scientific disciplinary knowledge in engineering or computer science and translate their research experiences into classroom activities and curricula to broaden their students' awareness of and participation in computing and engineering pathways. At the same time, the hosting research faculty (PI) will deepen their understanding of classroom practices, current curricula, pedagogy, and K-14 educational environments.

Deadline: October 11, 2023

NSF: Broadening Participation in Engineering

Through the Broadening Participation in Engineering (BPE) Program [[NSF 22-514](#)], NSF seeks to strengthen the future U.S. engineering workforce by enabling and encouraging the participation of all citizens in the engineering enterprise. The BPE Program seeks to support not only research in the science of broadening participation and equity in engineering, but also collaborative endeavors which foster the professional development of a diverse and well-prepared engineering workforce as well as innovative, if not revolutionary, approaches to building capacity through inclusivity and equity within the engineering academic experience.

To solicit the best ideas for these activities, both in formation and enactment, the BPE Program will support projects at various levels of readiness and complexity through the following four tracks:

- **Track 1: Planning and Conference Grants**
Deadline: Proposals accepted ANYTIME
- **Track 2: Research in Broadening Participation in Engineering**
Deadline: Proposals accepted ANYTIME
- **Track 3: Inclusive Mentoring Hubs (IM Hubs)**
Deadline: November 15, 2023
- **Track 4: Centers for Equity in Engineering (CEE)**
LOI Deadline: September 20, 2023 (Strongly recommended)
Full Proposal Deadline: November 15, 2023

RECENTLY AWARDED GRANTS

- Benjamin Davis Braaten (PI), Umamaheswara Rao Tida (Co-PI), Shuvashis Dey (Co-PI), Xin Sun (Co-PI), Ewumbua Monono (Co-PI), Minwei Xu (Co-PI), Sulaymon Eshkabilov (Co-PI), Qifeng Zhang (Co-PI). Fusion of Machine Learning and Electromagnetic Sensors for Real-Time Local Decisions in Agriculture. \$1,237,337 from the Agricultural Research Service. 7/1/2023 - 10/31/2024.
- Chau Le (PI). Augmenting the hearing of safety-critical sounds for highway workers using artificial intelligence. \$14,000 from the Federal Highway Administration. 10/1/2023 - 9/30/2025.
- Yao Yu (PI). Building energy audit and analysis of Academic Buildings at North Dakota State University. \$25,000 from the Department of Energy. 8/2/2023 - 6/30/2024.

RECENTLY SUBMITTED PROPOSALS

- Hyeongjin Jeon (PI), Juwon Choi (Co-PI), Youjin Jang (Co-PI), Inbae Jeong (Co-PI). IoT Sensing Data-Driven Digital Twins for Event-Specific Proactive Crowd Management. \$571,699 from the National Science Foundation. 2/1/2024 - 1/31/2027.

- Jacob Glower (PI). Bison Academy Lecture & Video Upgrades for ECE 111 Intro to ECE and ECE 320 Electronics I. \$2,000 from the ND University System Office. 6/12/2023 - 5/9/2025.
- Zhibin Lin (PI), Yan Zhang (Co-PI), Wan Wang (Co-PI). EAGER: CET: Collaborative Research: How big can the floating offshore wind turbine get. \$180,000 from the National Science Foundation. 1/1/2024 - 12/31/2025.
- Syeed Md Iskander (PI). Release of Nanoplastics and Additives in Food from Plastic Packaging. \$650,000 from the National Institute of Food & Agriculture. 1/1/2024 - 12/31/2027.
- Sulaymon Eshkabilov (PI), Julia Hadfield Bowsler (Co-PI), Benjamin A Geaumont (Co-PI). Wireless Sensor Based IoT System for Honey Bee Health Monitoring. \$750,000 from the National Institute of Food & Agriculture. 6/1/2024 - 5/31/2029.

RECENT PUBLICATIONS

For 2023, 183 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:

- Borode, Temitope, Danling Wang, and Anamika Prasad. 2023. "Polyaniline-Based Sensor for Real-Time Plant Growth Monitoring." *SENSORS AND ACTUATORS A-PHYSICAL* 355 (June): 114319. <https://doi.org/10.1016/j.sna.2023.114319>.
- Cao, Yalei, Jianjun Wang, Yangchao Liao, and Lihua Tang. 2023. "A Comprehensive Dynamic Continuous Model of Piezoelectric Stack Energy Harvesters under Arbitrary Excitation Considering Electrodes and Protective Layers." *JOURNAL OF PHYSICS D-APPLIED PHYSICS* 56 (46): 464001. <https://doi.org/10.1088/1361-6463/aceb01>.
- Cherukuri, Akhila Sai Sree, Vaishnavi Kalpesh Modi, Bhavana Baraskar, Shubham Sood, Reshma Reguram, Divyanshi Palvia, Keerthy Gopalakrishnan, et al. 2023. "Microwave-Based Dielectric Properties as an Electrophysiological Biomarker: Future Perspectives." *ELECTRONICS* 12 (15): 3276. <https://doi.org/10.3390/electronics12153276>.
- Delavarpour, Nadia, Cengiz Koparan, Yu Zhang, Dean D. Steele, Kelvin Betitame, Sreekala G. Bajwa, and Xin Sun. 2023. "A Review of the Current Unmanned Aerial Vehicle Sprayer Applications in Precision Agriculture." *JOURNAL OF THE ASABE* 66 (3): 703–21. <https://doi.org/10.13031/ja.15128>.
- Huang, Oscar D. D., Jungyeon Jang, Surya Sarat Chandra Congress, Anand J. J. Puppala, and Miladin Radovic. 2023. "Performance Evaluation of Cohesionless Soils Stabilized Using Metakaolin-Based Geopolymer for Infrastructure Applications." *JOURNAL OF MATERIALS IN CIVIL ENGINEERING* 35 (10): 04023340. <https://doi.org/10.1061/JMCEE7.MTENG-15627>.
- Saraswat, Anuj, Shri Ram, Saber Kouadri, Md Basit Raza, H. C. Hombegowda, Randhir Kumar, Debasis Golui, et al. 2023. "Groundwater Quality, Fluoride Health Risk and Geochemical Modelling for Drinking and Irrigation Water Suitability Assessment in Tundla Block, Uttar Pradesh, India." *GROUNDWATER FOR SUSTAINABLE DEVELOPMENT* 23 (November): 100991. <https://doi.org/10.1016/j.gsd.2023.100991>.
- Wang, Guanzhong, Huanhai Xin, Di Wu, Zhiyi Li, and Ping Ju. 2023. "Grid Strength Assessment for Inhomogeneous Multi-Infeed HVDC Systems via Generalized Short Circuit Ratio." *JOURNAL OF MODERN POWER SYSTEMS AND CLEAN ENERGY* 11 (4): 1370–74. <https://doi.org/10.35833/MPCE.2021.000814>.
- Wang, Yunfei, Song Zhang, Guillaume Freychet, Zhaofan Li, Kai-Lin Chen, Chih-Ting Liu, Zhiqiang Cao, Yu-Cheng Chiu, Wenjie Xia, and Xiaodan Gu. 2023. "Highly Deformable Rigid Glassy Conjugated Polymeric Thin Films." *ADVANCED FUNCTIONAL MATERIALS*, August. <https://doi.org/10.1002/adfm.202306576>.
- Wu, Lili, Hui Wang, Xiang Xu, and Zhibin Lin. 2023. "Investigation on Bond Durability of GFRP Bar/Engineered Cementitious Composite under Alkaline-Saline Environments." *JOURNAL OF BUILDING ENGINEERING* 77 (October): 107343. <https://doi.org/10.1016/j.jobe.2023.107343>.

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*.

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