

COLLEGE HAPPENINGS

August 3, 2021

FROM THE DEAN

Arrivals, Departures, and Appointments

From one academic year to the next we see a rhythm in the academy, where we say hello to new members who join our community, and we say goodbye to friends who are leaving us. Here are some of those changes for this summer.

Ademola Ajayi-Banji and **Niloy Sarker** recently joined the staff of the Department of Agricultural and Biosystems Engineering (ABEN) as research specialists. Meanwhile, Professor **Shafiqur Rahman** moved to Kansas City to become the Director of the Division of Global Climate Change at USDA National Institute of Food and Agriculture and Assistant Professor **Halis Simsek** left NDSU for a position at Purdue University.

Chau Le joins the newly merged Department of Civil, Construction and Environmental Engineering (CCEE) as an assistant professor from Texas A&M University where he completed his PhD in Interdisciplinary Engineering with a concentration in Construction Engineering and Management. His B.Eng. and M.Eng degrees are from Ho Chi Minh City University of Technology, Vietnam. Dr. Le's thesis research was on "Novel Data-Driven Approaches for Enhanced Project Duration and Cost-Related Decision Making." **Maureen Kent** recently joined the CCEE department as the new office and finance manager. She comes to us from Minnesota, where she was a fiscal supervisor and accountant with Becker County and an agency budget lead for MnDOT. Prior to that she spent 17 years at the University of Mississippi in a variety of staff roles. **Ruth Wirtz** also joined the CCEE department as an administrative secretary (at 60%) from the Department of Military Science, and **Jan Lofberg** moved from CCEE to Military Sciences. We also say goodbye to Professor **Wei Lin**, who is retiring after 24 years at NDSU, Assistant Professor **Beena Ajmera**, who is moving to Iowa State University, **Milka Singha**, who has resigned from her academic student services coordinator position, and Associate Professor **Todd Sirotiak** and Assistant Professor **Huojun Yang**, who have left the faculty.

In the Department of Computer Science (CS) **Zahid Anwar** joins the faculty as an associate professor and Challey Scholar. Dr. Anwar, an expert in cyber security, arrived from Fontbonne University in St. Louis where he worked as an associate professor. He received his MS and PhD in Computer Science from the University of Illinois at Urbana-Champaign, and his BS in Computer Systems Engineering from GIK Institute of Eng. Sci & Tech., Pakistan. **Dave Froslic** will also be joining the CS Department with a half-time appointment as a lecturer leading the senior capstone course. Mr. Froslic, who spent the last 20 years at Microsoft after 13 years at MTS Systems, received his BS in electrical engineering from NDSU, his MBA from University of Saint Thomas, and his MS in Data Science from the University of Wisconsin. Finally, **Melissa Bethard** joined the CS Department as an administrative assistant from John T. Jones Construction in Fargo. She also worked previously for Citibank for 16 years in San Antonio. On the departure side, **Dan Kahn** and **Monica Haugen** stepped down as capstone coordinator and administrative assistant respectively.

In the Department of Electrical and Computer Engineering (ECE), **Omid Beik** and **Suvashis Dey** join the faculty as assistant professors and **Benaoumeur Senouci** joins as an assistant professor of practice. Dr. Beik completed his PhD at McMaster University in Hamilton, Ontario, Canada in 2016 and has held academic and industrial positions in Ontario

since then. His MS degree is from Shahid Beheshti University (SBU), Tehran, Iran and his BS is from Yazd University, Iran. He specializes in various aspects of electric machines, drives and power electronics with application in renewable energy systems, specifically all-DC wind generation systems, and transportation electrification. Dr. Dey completed his PhD and Postdoc in Electrical and Computer Systems Engineering at Monash University, Australia, his MS in Wireless Networks at University of London, and his B.Tech in Electronics and Communications Engineering from National Institute of Technology, Durgapur, India. His experience includes microwave and RF circuit modelling, optimization, fabrication and testing. Dr. Senouci has worked as a faculty member of ECE-Paris since 2014 and received his PhD at University of Joseph Fourier, Polytechnic Institute of Grenoble, France, Ph.D. in Computer Science and Engineering. He has experience in artificial intelligence and deep learning models for cyber physical systems, smart and autonomous vehicles, and smart-networked embedded systems prototyping.

In the Department of Industrial and Manufacturing Engineering, Professor **Om Yadav** is leaving for a department chair position at NC A&T after 17 years at NDSU. Additionally, in the Department of Mechanical Engineering, Professor **Bob Pieri** is retiring after 25 years of service at NDSU.

Please join me in welcoming the new faculty and staff to the College of Engineering. And to our friends leaving us this summer, we wish you good luck and Godspeed as you move on to other opportunities.

Finally, I am pleased to announce that Michael Chu has been appointed the Walter B. Booth Professor from the Walter B. Booth Professorship endowed faculty fund.



IN THE NEWS

[Inspiring Teacher: Beena Ajmera, assistant professor of civil and environmental engineering](#)

[Summer undergraduate research programs connect students with NDSU faculty](#)

[Doosan Bobcat continues to demonstrate its commitment to STEM programs at North Dakota State University](#)

CONGRATULATIONS

To the 2021 College of Engineering Award winners:

Teaching

- Excellence in Teaching – Joseph Latimer
- Early Career Excellence in Teaching – Danling Wang
- Graduate Teaching Assistant of the Year – Lauren Singelmann

Research

- Excellence in Research – Ying Huang
- Early Career Research Excellence – Ravi Yellavajjala
- Graduate Research Assistant of the Year – Dayakar Naik Lavadiya

Staff

- Professional Level – Alissa Kuntz
- Paraprofessional/Office Support Level – Tanya Erickson

All the winners will be honored Friday, September 10 at the College of Engineering Scholarship and Awards Reception.

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, August 17, **New Faculty Orientation**. The event runs from 8:30 a.m. – 4:00 p.m. [Register here](#).

Wednesday, August 18, **Annual Faculty and Academic Staff Conference**. Presentations will include demonstrating best practices for research, instruction, advising, assessment, campus climate, inclusion, mentoring, leadership, and classroom technologies. [Register here](#).

Monday, August 23, **College of Engineering Welcome Week Event**. 8:30 – 10:30 a.m. at the Bentson-Bunker Fieldhouse.

Friday, September 10, **College of Engineering Scholarship and Awards Reception**. Join us as we celebrate our scholarship recipients and donors and to recognize the accomplishments of outstanding faculty, staff and students 3:00 – 4:30 p.m. in the Oćefi Őakowiŋ Ballroom. [Register here](#).

Friday, October 8, **College of Engineering Homecoming Showcase**. 12:00 – 1:30 p.m. in the Oćefi Őakowiŋ Ballroom.

WELCOME WEEK VOLUNTEER OPPORTUNITIES

Move-In and Welcome Week are a time when our entire NDSU community can come together to help incoming students know they belong here. To make this transition a positive experience for students and their guests, we need your help.

A variety of offices have come together to develop Welcome Week volunteer opportunities from August 21-September 1.

- [Select your volunteer shift\(s\) here](#) and visit the [volunteer website here](#) for more information.

Additional Welcome Week Engagement Opportunities:

- **Welcome to the Academy | Monday, August 23 (12:45pm, 1:45pm or 3:00pm)**: Celebrate the Class of 2025 as we cheer them on while they walk through the east campus Gates following their Welcome by President Dean Bresciani. This session will occur three times.
- **Focus on 5**: Connecting with five students, for five minutes each, for the first five days of the academic year. This small act of outreach has the potential to make a big positive impact on a student's NDSU experience!

FUNDING OPPORTUNITIES

NSF: Computational and Data-Enabled Science and Engineering (CDS&E)

Large-scale simulations and the ability to accumulate massive amounts of data have revolutionized science and engineering. The goal of the CDS&E meta-program [[PD 21-8084](#)] is to identify and capitalize on opportunities for major scientific and engineering breakthroughs through new computational and data-analysis approaches and best practices.

Areas of emphasis for CDS&E vary by program. Programs involved include:

- Division of Mathematical Sciences;
- Division of Civil, Mechanical and Manufacturing Innovation;

- Division of Chemical, Bioengineering, Environmental, and Transport Systems;
- Office of Advanced Cyberinfrastructure;
- Division of Electrical, Communications and Cyber Systems;
- Division of Astronomical Sciences;
- Division of Chemistry; and
- Division of Materials Research.

NSF: Research on Emerging Technologies for Teaching and Learning

The purpose of the Research on Emerging Technologies for Teaching and Learning (RETTL) program [[NSF 20-162](#)] is to fund exploratory and synergistic research in emerging technologies (to include, but not limited to, artificial intelligence (AI), robotics, and immersive or augmenting technologies) for teaching and learning in the future. The program accepts proposals that focus on learning, teaching, or a combination of both.

Deadline: October 18, 2021

FY 2021 AWARDS, PROPOSALS AND EXPENDITURES

Fiscal Year 2021 was a very successful one for researchers in the College of Engineering. Here's a look at the numbers:

Awards Received: \$11.997 M

Proposals Submitted: \$63.5 M

Expenditures: \$6.7 M

RECENTLY FUNDED GRANTS

- David Grewell (PI), Chad A Ulven (CPI), Alan R Kallmeyer (CPI). IUCRC Phase II at North Dakota State University: Center for Bioplastics and Biocomposites [CB2]. \$755,000 from the National Science Foundation. 07/01/2021 – 06/30/2026.
- Sudarshan Kumar Srinivasan (PI). SaTC: CORE: Small: Formal Verification Techniques For Microprocessor Security Vulnerabilities and Trojans. \$352,167 from the National Science Foundation. 08/15/2021 – 08/14/2024.
- Long Jiang (PI). Soy Protein-based Soft Gels for Sensors and Soft Robotics. \$37,336 from the ND Soybean Council. 07/01/2021 - 06/30/2022.
- Alan R Kallmeyer (PI). Acquisition of Supplies to Support Robotics Education at NDSU. \$4,944 from the PMMI Foundation. 06/30/2021 - 03/31/2022.

RECENTLY SUBMITTED PROPOSALS

- Huojun Yang (PI). Mobile home-based labs to enhance undergraduate education in building energy systems. \$300,000 from the National Science Foundation. 12/1/2021 - 11/30/2024.
- Xin Sun (PI), Yu Zhang (CPI), Mohammed Raju Ahmed (CPI), Cengiz Koparan (CPI). Intelligence on farm real-time weed control solution based on Edge-AI, UAV and UGV systems. \$649,468 from the National Institute of Food & Agriculture. 1/1/2022 - 12/31/2025.
- Dali Sun (PI), Nega A Ejjigu (Graduate Student). Elliptical Dichroism Microscopy for Cellular Stereochemistry Analysis. \$504,757 from the National Science Foundation. 1/1/2022 - 12/31/2026.
- Adam Curtis Gladen (PI). CAREER: Storing Solar Energy through the Catalytic Torrefaction of Biomass in Molten Salts. \$519,417 from the National Science Foundation. 1/1/2022 - 12/31/2027.
- Danling Wang (PI). CAREER: Novel Nano-enabled Sensing System for Noninvasive Early Disease Detection and Intelligent Health Management. \$495,291 from the National Science Foundation. 5/1/2022 - 4/30/2027.

- Yan Zhang (PI). Enhancement of Left Atrial Appendage Flow using Artificial Superhydrophobic Surface. \$35,000 from the American Heart Association. 7/1/2021 - 6/30/2022.
- Fardad Azarmi (PI). DEVELOPMENT OF SUSTAINABLE ENGINEERING LABORATORY AT NDSU. \$49,566 from the NDSU Foundation & Alumni Association. 10/15/2021 - 10/14/2024.
- Joao Paulo Cassol Flores (CPI). Harnessing Data for Accurate Yield and Oil Content Prediction. \$228,621 from the National Institute of Food & Agriculture. 1/1/2022 - 12/31/2024.

RECENT PUBLICATIONS

For 2021, 137 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:

- Ahmed, Hafiz Usman, Liuqing Hu, Xinyi Yang, Raj Bridgelall, and Ying Huang. n.d. “Effects of Smartphone Sensor Variability in Road Roughness Evaluation.” *International Journal of Pavement Engineering*. Accessed July 27, 2021. <https://doi.org/10.1080/10298436.2021.1946059>.
- Bai, Xin, Mijia Yang, and Baoyun Zhao. n.d. “Image-Based Displacement Monitoring When Considering Translational and Rotational Camera Motions.” *International Journal of Civil Engineering*. Accessed July 26, 2021. <https://doi.org/10.1007/s40999-021-00653-5>.
- Jeong, Inbae, Youjin Jang, Jisoo Park, and Yong K. Cho. 2021. “Motion Planning of Mobile Robots for Autonomous Navigation on Uneven Ground Surfaces.” *Journal of Computing in Civil Engineering* 35 (3): 04021001. [https://doi.org/10.1061/\(ASCE\)CP.1943-5487.0000963](https://doi.org/10.1061/(ASCE)CP.1943-5487.0000963).
- Liao, Zhiheng, Jingyan Fu, and Jinhui Wang. 2021. “Ameliorate Performance of Memristor-Based ANNs in Edge Computing.” *IEEE Transactions on Computers* 70 (8): 1299–1310. <https://doi.org/10.1109/TC.2021.3081985>.
- Vaddevolu, Uday Bhanu Prakash, Justin Lester, Xinhua Jia, Thomas F. Scherer, and Chiwon W. Lee. 2021. “Tomato and Watermelon Production with Mulches and Automatic Drip Irrigation in North Dakota.” *Water* 13 (14): 1991. <https://doi.org/10.3390/w13141991>.

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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