

COLLEGE HAPPENINGS

December 26, 2018

FROM THE DEAN

Happy Holidays and Year in Review

The holiday season always brings a flurry of activity to go with the flurries of snow. And with a blizzard on its way, we have arrived at the end of the calendar year. Among the many year-end traditions are a look back at the past year, and a look forward to the new one. Here are some of our accomplishments over the past twelve months:

We graduated 476 students

Part of our mission is to prepare innovative problem solvers and we graduated a near record number of students this year.

- We awarded 418 baccalaureate degrees in 2018
- We awarded 45 MS degrees
- We awarded 13 PhD degrees

Our faculty, staff and students earned honors and awards

- Kalpana Katti was named this year's winner of the Waldron Excellence in Research Award at NDSU, inducted into the American Institute for Medical and Biological Engineering's College of Fellows and named the 2018 College of Engineering Researcher of the Year.
- Alan Kallmeyer was honored with the Chamber of Commerce Distinguished Faculty Service Award.
- Achintya Bezbaruah was awarded a Fulbright Specialist Award and selected as the recipient of the Walter F. and Verna Gehrts Endowed Professorship Award
- Ying Huang won a National Science Foundation CAREER Award.
- Ken Hellevang was named the Professional Engineer of the Year by the American Society of Agricultural and Biological Engineers.
- Mechanical engineering students Braden Lach, Aaron Knudtson and Jason Schirck won the Innovation Challenge People's Choice Award.
- An NDSU team of students advised by Ali Amiri won the 3M Disruptive Design Challenge.
- The engineering student led Bison Robotics team won several awards, including 2nd overall, at the 2018 NASA Robotic Mining Competition.
- Teams of construction management students placed 2nd and 3rd at the 2018 Upper Midwest Intercollegiate Construction Management Quiz Bowl.
- Wei Lin was awarded the American Water Works Association 2018 George Warren Fuller Award.
- Xuefeng "Michael" Chu was named director of the North Dakota Water Resources Research Institute.
- Ambassadors from the College of Engineering and College of Health Professions collected a record \$5,680.14 during the eighth annual "Battle of the Cents-es" event.

- Dean Steele was honored with the 2018 College of Engineering Excellence in Teaching Award.
- Keerthi Nawarathna won the 2018 College of Engineering Early Career Excellence in Teaching Award.
- Ashkan Eslaminejad was awarded the 2018 College of Engineering Graduate Teaching Assistant of the Year.
- Zhibin Lin was recognized with the 2018 College of Engineering Early Career Researcher of the Year.
- Logeeshan Velmanickam was named the 2018 College of Engineering Graduate Student Researcher of the Year.
- Om Yadav was honored as the 2019 IISE Golomski Paper Award winner.
- Dong Cao was appointed as the associate editor for the IEEE Journal of Emerging and Selected Topics in Power Electronics and, along with Yanchao Li and Xiaofeng Lyu, won the prestigious 2018 IEEE Journal of Emerging and Selected Topics in Power Electronics second prize paper award.
- The College of Engineering was ranked one of the nation's best values and recognized for its commitment to diversity.
- Engineering faculty and staff hosted researchers from around the world for the third International Symposium on Materials from Renewables and the 50th National Power Symposium.

We celebrated new initiatives

- The newly established College of Engineering Advisory and Advancement Board held its first two meetings.
- The college made significant progress on the development of a new strategic plan.
- We implemented a new communications strategy for both internal and external audiences. It includes, among other actions, an increased presence on social media, a new college website and our College Happenings newsletter.

And we awarded two new faculty fellowships

Through generous donations from two of our alumni we were able to establish two new named faculty fellowships.

- Om Yadav will be the inaugural holder of the Spencer G. and Carol A. Duin Endowed Fellowship and will be known as the Duin Endowed Fellow.
- Ying Huang will be the inaugural holder of the Welch Faculty Fellow funded by the Timothy Welch and Donna LaQua-Welch Faculty Excellence Fund.

Several faculty members earned promotions this year

- Ben Braaten was appointed as chair of the Department of Electrical and Computer Engineering.
- Jerry Gao was appointed chair of the NDSU Department of Construction Management and Engineering.
- Scott Pryor, Xuefeng Chu, Rajesh Kavasseri, Chad Ulven and Dilpreet Bajwa were promoted to Full Professor by NDSU President Dean Bresciani.
- Ying Huang, Debasis Dawn and Zhulu Lin were approved for tenure by the North Dakota State Board of Higher Education and promoted to Associate Professor by NDSU President Dean Bresciani.

We also made some outstanding new hires

- Nurun Nahar was hired as an assistant professor of practice in ABEN and Xin "Rex" Sun joined ABEN as an assistant professor.
- David R. Steward was appointed chair of the Department of Civil and Environmental Engineering and awarded the Walter B. Booth Distinguished Professorship.
- CEE also welcomed three new assistant professors, Trung Le, Beena Ajmera and Wenjie Xia.
- ECE hired Dali Sun as an assistant professor of biomedical engineering and Sayan Roy as a visiting assistant professor.
- David Grewell was appointed Chair of the Department of Industrial and Manufacturing Engineering and awarded the Walter B. Booth Distinguished Professorship.

- IME also welcomed Trung “Tim” Le as an assistant professor and Benjamin Deetz who will work part-time at the Center for Bioplastics and Biocomposites (CB²) in business development and part-time in polymers and coatings.
- Zhegping Zhou joined the Department of Mechanical Engineering as an assistant research professor and Will Refling joined ME as a research engineer.
- Kyle Bosch joined the staff as the new Director of Communications and Marketing for the College of Engineering.
- Lauren Singelmann was hired as the new Outreach Coordinator for the College of Engineering.
- Jill Stevens started in August as the new Office Coordinator and Assistant to the Dean (leaving in January).
- CME welcomed Kayla Dewey as the new Assistant to the Chair.
- Eileen “Anne” Campbell is the new academic secretary for ECE.

And we said goodbye to several colleagues

- Eakalak Khan (Last day was 12/31/17) and Sivapalan Gajan left CEE.
- Matt Stone and Ann Denney retired from CME.
- ECE said goodbye to Priscilla Schlenker, Jinhui Wang, Na Gong and Debasis Dawn. While Sanjay Karmakar and Sayan Roy are leaving at the end of the December.
- Lorelee Meier and Chrysafis Vogiatzis (Last day was 12/31/17) left IME and Bashir Khoda’s last day will be December 31st.
- Bruce Horton retired from ME.
- Sheri Eberle left her position in the Dean’s Office.

Innovation is our status quo and our efforts to create new knowledge were awarded millions of dollars

Totals for FY 2018

- Awards Received – \$3.25 million
- Expenditures – \$4.32 million

Totals for FY 2019 (as of December 15)

- Awards Received – \$3.47 million
- Expenditures – \$2.10 million

We served our community through our K-12 outreach programs

- We brought 300 8th grade girls to campus for Introduce a Girl to Engineering Day.
- We hosted Bison BEST Robotics Competition for the 12th straight year and are getting ready for the FIRST Lego League Qualifying Tournaments in January.
- We taught dozens of kids about engineering and science during our Summer Youth STEM camps.

In addition to the year-end tradition of looking back at the past year, it is also time to look forward to 2019. Next year will likely continue to be a challenge in terms of budgetary resources, but there will still be opportunities for the College of Engineering to expand its programs and impact, including a potential minor in Robotics Engineering and the move of the Department of Computer Science to the college. We will also begin to implement a new strategic plan with a focus on enhancing society through leadership and innovation. There will certainly be new challenges to face, but the most important of all is to keep delivering on our commitment to provide the best education possible to our students and to produce the best science/engineering in the world in all of our areas of expertise. Thanks you all for your hard work over the course of 2018. There are going to be some notable pay-offs in 2019, and beyond. Now it is time to relax a little, reflect on the past year, and get ready to come back next year, ready to achieve even more. I wish you all a happy new year!



IN THE NEWS

[New precision ag major offered at NDSU](#)

[NSF CAREER recipient appointed Welch Faculty Fellow](#)

CONGRATULATIONS

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

Wednesday, January 9, 2019, **Financial Flourishing and Get Moving at Work**. This one hour educational event is presented as part of the **NDSU Wellness Program**. 9:30 am. – 10:30 a.m. in the Memorial Union Arikara Room.

[Enroll here.](#)

Thursday, January 10, 2019, **NDSU Day of Honor memorial service**. 3:00 p.m. Memorial Union Plains Room. If you know of a member of our campus community who has passed away in 2018, please visit the [Day of Honor webpage](#) to complete a submission form. **Submission forms will be accepted through Friday, January 4, 2019.**

DISTINGUISHED LECTURE SERIES NOMINATIONS

The College of Engineering Graduate and Research Committee is inviting nominations for the **CoE Distinguished Lecture Series for Spring and Fall 2019**.

Submissions for Spring nominations are due to department chairs by **December 31st**. Submissions for Fall nominations are due to department chairs by **March 31st, 2019**.

The invitation procedure, selection criteria and nomination form can be found [here](#).

FUNDING OPPORTUNITIES

ND NASA EPSCoR:

The North Dakota NASA Established Program to Stimulate Competitive Research (EPSCoR) is soliciting pre-proposals from North Dakota faculty in STEM fields to fulfill the following solicitation. Eligible proposers include faculty members at a [ND NASA EPSCoR affiliate institution](#).

The NASA EPSCoR (Established Program to Simulate Competitive Research) FY18 Cooperative Agreement Notice (CAN) R3 Solicitation limits each jurisdiction to the submission of one proposal per each of the technical areas specified. This down-select process is to identify which proposal(s) will go forward for North Dakota.

- More details on the down-select process can be found [here](#).
- The R3 Solicitation and amendments can be found [here](#).
- A pdf of the North Dakota NASA EPSCoR Pre-proposal Down-select with guidelines for proposers can be found [here](#).

Email pre-proposal as a PDF attachment by Noon on **February 1, 2019** to: casler@space.edu and cnolby@space.edu

RECENTLY FUNDED GRANTS

- Matthew J Noah (PI). COE-CSCC Voxtelays Smartphone R&D. \$199,851 from Voxtelays. 10/26/2018 – 04/30/2020.
- Long Jiang (PI). Producing Carbon Fiber/Fabric Using End-of-life Cotton and Application Development. \$42,877 from Cotton Incorporated. 01/01/2019 – 12/31/2019.

RECENTLY SUBMITTED PROPOSALS

- Mijia Yang (PI). Rating Concrete Water Permeability Based on Resistivity Measurements. \$600,000 from The National Academies. 04/01/2019 – 03/31/2022.
- Scott Christopher Smith (PI). Turning Visual Noise into Hardware Efficiency: Viewer-Aware Energy-Quality Adaptive Mobile Video Storage. \$150,444 from the National Institutes of Health. 11/01/2018 – 09/30/2021.
- Di Wu (PI). Distributed Protection and Restoration Schemes for Integration of Large-scaled Solar PV Installations and Responsive Loads: Design, Testbed, Proof of Work and Impact Studies. \$599,613 from the Department of Energy. 06/01/2019 – 05/31/2022.
- Dharmakeerthi Nawarathna (PI). Nano-scale nucleic acid molecular separation and integrated fluorescence enhancement for microRNA detection: Diagnosis device for personalized weight-loss intervention. \$341,374 from the National Science Foundation. 5/01/2019 – 04/30/2022.
- Qifeng Zhang (PI). Boosting the Lithium Ionic Conductivity of Garnet-type Solid-state Electrolytes through Computational and Experimental Investigations. \$337,476 from the Department of Energy. 07/01/2012 – 06/30/2021.
- Kambiz Farahmand (PI). Sustainable Supply Chain to Meet the Rapid-Response Needs of the Healthcare Industry. \$49,868 from APICS. 06/01/2019 – 05/31/2020.
- Trung Quoc Le (PI). Point-of-care Obstructive Sleep Apnea (OSA) Monitoring and Forecasting Platform for Cancer Patients. \$25,000 from the National Institutes of Health. 01/01/2019 – 08/31/2019.
- Ghodrat Karami (PI). Design of a New NASA Rover for 2019 Rover Challenge Competition - ME Senior Design Project. \$6,000 from the University of North Dakota. 12/01/2018 – 04/30/2019.
- Xiangfa Wu (PI). DOE Office of Science: Hybrid Membrane for Electrochemical Oxygen Anion Transport. \$250,000 from the Department of Energy. 04/01/2019 – 03/31/2021
- Chad A Ulven (PI). Advanced Bio-laminates to Create a Climate Adaptive Building Shell in Order to Reduce Embodied and Operational Energy Use in Buildings. \$298,999 from the National Science Foundation. 07/01/2019 – 06/30/2022.

RECENT PUBLICATIONS

For 2018, 118 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 Ali Amiri. 2019. "Microstructural Evolution during Fabrication of Alumina via Laser Stereolithography Technique." *Ceramics International* 45 (1): 271–78.
<https://doi.org/10.1016/j.ceramint.2018.09.163>.
- Hossain, Md Razuan, Qifeng Zhang, Michael Johnson, and Danling Wang. 2018. "Highly Sensitive Room-Temperature Sensor Based on Nanostructured K2W7O22 for Application in the Non-Invasive Diagnosis of Diabetes." *Sensors* 18 (11): 3703. <https://doi.org/10.3390/s18113703>.
- Katti, Dinesh R., Keshab B. Thapa, and Kalpana S. Katti. 2018. "The Role of Fluid Polarity in the Swelling of Sodium-Montmorillonite Clay: A Molecular Dynamics and Fourier Transform Infrared Spectroscopy Study." *Journal of Rock Mechanics and Geotechnical Engineering* 10 (6): 1133–44.
<https://doi.org/10.1016/j.jrmge.2018.07.001>.

- Mughal, Shuja, Assad Abbas, Naveed Ahmad, and Samee U. Khan. 2018. "A Social Network Based Process to In-Group Biasedness During Requirement Engineering." *Ieee Access* 6: 66870–85. <https://doi.org/10.1109/ACCESS.2018.2879385>.
- Nasab, Mohsen Tahmasebi, Kendall Grimm, Mohammad Hadi Bazrkar, Lan Zeng, Afshin Shabani, Xiaodong Zhang, and Xuefeng Chu. 2018. "SWAT Modeling of Non-Point Source Pollution in Depression-Dominated Basins under Varying Hydroclimatic Conditions." *International Journal of Environmental Research and Public Health* 15 (11): 2492. <https://doi.org/10.3390/ijerph15112492>.

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*.

Follow the College of Engineering on social media.

