

COLLEGE HAPPENINGS

February 19, 2019

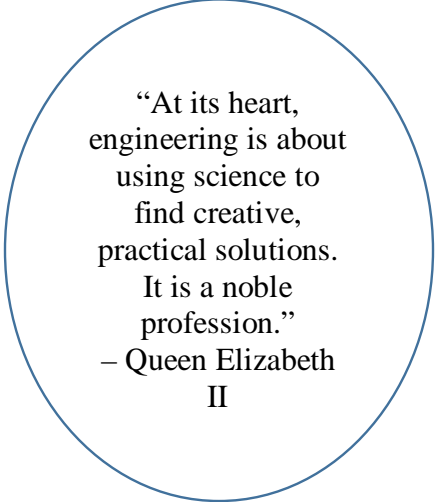
FROM THE DEAN

Eweek and Importance of Engineering Licensure

Happy National Engineers Week, Eweek (February 17-23, 2019), a week celebrated each February to honor the engineering profession and to increase understanding of and interest in engineering and technology careers. One of the events that we host at NDSU as part of Eweek is “Introduce a Girl to Engineering Day”, where on Friday more than 250 eighth-grade girls from area school districts will visit NDSU in the morning followed by visits to host engineering companies in the afternoon. Eweek, founded almost 70 years ago by the National Society of Professional Engineers (NSPE), reaches thousands of schools, businesses and other groups each year. Eweek is also a great time to reflect on what Queen Elizabeth II referred to as the noble profession that is engineering.

NPSE is the professional association representing licensed professional engineers in the United States. As most of you know, the first step toward Professional Engineer (PE) licensure is passing the Fundamentals of Engineering (FE) exam (and completing a minimum of three years of post-secondary school at an ABET-accredited engineering program) to become an Engineer in Training, or EIT. After graduation and the accumulation of four years of engineering experience, the EIT is eligible to take the Principles and Practice in Engineering exam; passing that exam is the final step in becoming a PE. Those two little letters—P & E—added at the end of a professional engineer’s name can open doors of opportunity for our graduates. Professional licensure can only help their career by adding to their credentials. One of the benefits is quite tangible, according to a report from the American Society of Civil Engineers and the American Society of Mechanical Engineers, engineers with a PE license earn a median income 5% higher than unlicensed engineering professionals. In addition, professional licensure is required for certain jobs, such as starting an individual consulting firm, the ability to serve as professional witnesses in courts, or in areas that states regulate, such as HVAC for buildings or public infrastructure. The PE license provides our graduates with more flexibility in their career, instant credibility, documented competency, and accountability to better themselves through required continuing education. In some states (for example Ohio and New Jersey) unlicensed engineering graduates are even prohibited from using the term “engineer” in their title.

Unfortunately, the percentage of our students taking the FE exam during their senior year has decreased significantly over the past several years. This may be due in part to a change in the testing format where students can now register to take the test during most months of the year, eliminating the old cohort experience and peer pressure that students had to prepare for the exam in anticipation of a once or twice a year deadline. Regardless of the reason, I think it is important that we emphasize to our students the importance of pursuing engineering licensure. We also need to explain that the best time to take the FE exam is while they are still in school, when all the information is fresh and they are using it every day



“At its heart,
engineering is about
using science to
find creative,
practical solutions.
It is a noble
profession.”
– Queen Elizabeth
II

in their classes. Talk to your students about the importance of engineering licensure and encourage them to take the FE exam their senior year.

By the way, many of our own faculty are not professional engineers. If you aren't a PE, you should consider pursuing licensure for your own professional development. What's good for the goose is good for the gander.



IN THE NEWS

[Bison Robotics team to compete in world championship](#)

[NDSU Foundation reports strong philanthropic support in 2018](#)

[NDSU students present projects on agricultural and biosystems engineering](#)

CONGRATULATIONS

Ken Hellevang from the **Department of Agricultural and Biosystems Engineering** has been selected to receive the American Society of Agricultural and Biological Engineers (ASABE) **2019 Sukup Global Food Security award**. The award will be presented during the 2019 ASABE Annual International Meeting in July.

Ryan Carda, a student in the **Department of Agricultural and Biosystems Engineering**, has been selected to receive the American Society of Agricultural and Biological Engineers (ASABE) **2019 Roger R. & Laura M. Yoerger Preprofessional Engineer of the Year award**. The award will be presented during the 2019 ASABE Annual International Meeting in July.

Mohsen Tahmasebi Nasab, a doctoral student in the **Department of Civil and Environmental Engineering**, will be inducted into the **Tapestry of Diverse Talents**, a pictorial mosaic that recognizes students, faculty, staff, and alumni for the contributions to diversity they bring to NDSU. The ceremony is set for 12:00 p.m. on Wednesday, February 27 in the Memorial Union Century Theater.

Please let [College Happenings](#) know about honors, awards, new grants and other announcements so we can share them with other faculty and staff.

ABEN INTERIM CHAIR

Ken Hellevang has agreed to serve as the interim chair in the **Department of Agricultural and Biosystems Engineering**. In his role as interim chair in ABEN, Hellevang will be responsible for leading all aspects of the department. He began the role on February 15, 2019.

Hellevang has been a faculty member in ABEN since 1980 and is a nationally recognized expert in grain storage and drying, structural engineering, and home moisture issues. He has won numerous awards for his work and has also served in a variety of leadership roles with the American Society of Agricultural and Biological Engineers.

UPCOMING EVENTS

Thursday, February 21, **Three Minuet Thesis Competition and Graduate Student Showcase**. Event starts at 10:00 a.m. on the second floor of the Memorial Union. [Learn More Here](#).

Friday, February 22, **Introduce a Girl to Engineering Day**. 250+ 8th grade girls will be at the **Memorial Union Great Plains Ballroom from 9:00 – 11:30 a.m.** to interact with women engineering students, faculty and local professionals.

Thursday, February 21, **Mechanical Engineering Seminar**. Dean Webster will give his presentation on *Approaches to Functional Coatings and High Performance Bio-based Materials*. **1:00 - 1:50 p.m., Dolve Hall 118**

Monday, February 25, **Open Forum on Undergraduate Recruitment and Admission**. 3:00 p.m. in the Memorial Union Century Theater.

Wednesday, February 27, **Tapestry of Diverse Talents Induction Ceremony**. 12:00 p.m. in the Memorial Union Century Theater.

Wednesday, February 27, **Maintaining a Healthy Climate**. 3:15 – 4:30 p.m. in the Memorial Union Badlands Room. Identify barriers to a healthy, respectful climate. Discuss tough situations that can seem hopeless and entrenched. Create new strategies for old problems. **NDSU Ombuds Kristine Paranica** will facilitate the program. [Register Here](#).

Wednesday, February 27, **Innovation Challenge Project Showcase**. 4:30 -7:00 p.m. at the NDSU Research and Tech Park. Teams will be using working demos, videos, prototypes and posters to show the progress of their projects.

Tuesday, March 5, four certified **Gallop Strengths Coaches** will present a morning of leadership and self-discovery. **9:00 a.m. – Noon in the Memorial Union Great Room**. All NDSU faculty, staff, and students are invited to attend. Learn more and register: www.ndsu.edu/studentactivities

Thursday, April 11, **NDSU EXPLORE Annual Showcase** at the Memorial Union. [Registration is now open](#). Encourage your students to present their research and creative work in posters, oral presentations, or in other formats.

COLLEGE OF ENGINEERING AWARDS

The **Graduate and Research Committee** and the **Academic Affairs Committee** are now accepting nominations for the **College of Engineering Researcher and Teacher of the Year awards**.

Each year the college recognizes the outstanding research and teaching achievements of CoE faculty and graduate students.

Details about the awards, including nomination documents, instructions and previous winners can all be [found on the College of Engineering website](#).

Nominations and supporting materials are due by **Friday, April at 5:00 p.m.**

FUNDING OPPORTUNITIES

The **NDSU Foundation and Alumni Association Grants Committee** is accepting applications from faculty and staff for six grant funds for the 2019 academic year. The application deadline is **March 8, 2019, by 5:00 p.m.**

- **The Centennial Endowment** can provide maximum awards of \$5,000, with a total of \$22,000 available. This grant fund supports professorships, scholarships, biotechnology, faculty development, libraries and cultural arts.
- **The Board of Trustees Endowment** can provide maximum awards of \$1,000, with a total of \$5,000 available. This grant fund supports general programs across campus.
- **The Library Endowment** has \$3,000 available to award. This grant fund supports requests from any academic unit on campus for materials that will enhance the collections and/or operations of university libraries.
- **The Gordon A. Larson Foundation Fund** has \$17,000 available to award. This grant fund supports competitive grants for agricultural research efforts conducted at North Dakota State University.

- **The Carl A. and Jean Y. White Memorial Endowment for Agriculture Research** has \$4,000 available to award. This grant fund supports faculty and research staff to encourage Agricultural research initiatives.
- **The Engebretson Family Research Fund** has \$11,000 available to award. This grant fund is open every other academic year (odd years) and was established to support the advancement of pharmaceutical research, by encouraging the discovery and development of new drug therapies and delivery systems.

Faculty and staff can obtain application forms and additional information for all six grants at the Foundation and Alumni Association website: ndsufoundation.com/grants-and-awards-application.

For any further questions, please email Jennifer Reinhold at jennifer@ndsualumni.com The NDSU Foundation and Alumni Association will notify applicants of funding decisions by April 19, 2019.

RECENT PUBLICATIONS

For 2019, 16 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:

- Deng, Fodan, Ying Huang, and Fardad Azarmi. 2019. "Corrosion Behavior Evaluation of Coated Steel Using Fiber Bragg Grating Sensors." *Coatings* 9 (1): 55. <https://doi.org/10.3390/coatings9010055>.
- Govindaraju, Rao S., Mohamed Hantush, and Xuefeng Chu. 2019. "New Policy for Transparency of Data, Models, and Code." *Journal of Hydrologic Engineering* 24 (3): 01618001. [https://doi.org/10.1061/\(ASCE\)HE.1943-5584.0001785](https://doi.org/10.1061/(ASCE)HE.1943-5584.0001785).
- Shojaeiarani, Jamileh, Dilpreet S. Bajwa, Chad Rehovsky, Sreekala G. Bajwa, and Ghazal Vahidi. 2019. "Deterioration in the Physico-Mechanical and Thermal Properties of Biopolymers Due to Reprocessing." *Polymers* 11 (1): 58. <https://doi.org/10.3390/polym11010058>.
- Song, Jake, Ridvan Kahraman, David W. Collinson, Wenjie Xia, L. Catherine Brinson, and Sinan Keten. 2019. "Temperature Effects on the Nanoindentation Characterization of Stiffness Gradients in Confined Polymers." *Soft Matter* 15 (3): 359–70. <https://doi.org/10.1039/c8sm01539b>.
- Tang, Hongyuan, Xuezhi Deng, Zhibin Lin, and Xiang Zhou. 2019. "Analytical and Experimental Investigation on Bond Behavior of CFRP-to-Stainless Steel Interface." *Composite Structures* 212 (March): 94–105. <https://doi.org/10.1016/j.compstruct.2019.01.007>.

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.



