

COLLEGE HAPPENINGS

June 25, 2019

FROM THE DEAN

Invention Disclosures

I'm very excited that NDSU will become the lead site for an NSF funded Industry/University Cooperative Research Center (I/UCRC), with David Grewell continuing as the center director. This [Center for Bioplastics and Biocomposites](#) (CB²) was started about five years ago at Iowa State University and Washington State University and now also includes the University of Georgia and about 30 member companies supporting research projects through their annual membership dues to the center. As members of CB², the consortium companies receive non-exclusive, royalty free rights to any technology that is developed and patented from research projects funded by the center, which is a major carrot in recruiting companies to join the consortium.

CB² is a great example of integrating industry with research and education, and being involved with CB² since its inception has caused me to reflect on the importance of commercialization and technology transfer in university research. Conducting research in industrially relevant topics is at the very core of our mission as a land-grant university and a leading engineering program. With the passage of the Bayh-Dole Act in 1980, which allowed universities to protect and commercialize federally funded research, universities around the country have contributed significant economic development through their technology transfer efforts by turning research discovery into new businesses, products and services. However, research active faculty too often think of technology transfer and commercialization only as an afterthought in their quest to meet funding agency requirements or to communicate their research through journal papers and presentations.

A few years ago I was guilty of this, when, after publishing a journal paper describing a new type of polymer we'd developed, my graduate student ask me if we shouldn't file an invention disclosure on the technology. Of course, he was right. But, unfortunately, I wasn't focused on the technology transfer from the beginning of the research project. Consequently, the public disclosure from the journal paper, which occurred before we filed a provisional patent, restricted patent protection outside of the United States.

One of the first steps in the technology transfer process is to file an invention disclosure by completing the [NDSU Invention Reporting Form](#) (while the results are still confidential), which is a written description of the technology, with the Technology Transfer Office in the Office of Research and Creative Activity. The Technology Transfer Office then evaluates the disclosure and makes a decision on whether to pursue a patent so that an invention could be licensed in the future for use in the private sector.

In addition to potentially having a positive impact on society, providing personal fulfillment, and meeting research sponsor obligations, issued patents are looked at by the College of Engineering when considering tenure and promotion cases. Other benefits to pursuing technology transfer and filing invention disclosures and patents include professional recognition, career advancement, and, potentially, financial reward.

If a patent is issued and licensed to a company, revenues from patent royalties are distributed to both the inventor(s) and the university. Once the costs of obtaining and maintaining the patent protection are deducted, net revenue is annually distributed with 30% going to the inventor(s), 35%–50% going to the involved department(s) and 20%–35% to the NDSU Research Foundation. .

So, I encourage our faculty and research staff to be thinking about technology transfer from the beginning of your research projects and to take advantage of the resources at NDSU to help protect the intellectual property that develops. I'd like to see many more invention disclosures from the college this next year.



IN THE NEWS

[NDSU approved to offer innovative LEED Lab program](#)

[Water Resources Research Institute Graduate Research Fellowships awarded](#)

[Baseball student-athlete named Google Cloud Academic All-American](#)

[McLean, Hesse named to Summit League All-Academic Team](#)

[Brave new world of drones, ag data](#)

CONGRATULATIONS

Seven College of Engineering graduate students, **Mohammad Hadi Bazrkar, Hoang Nu Kim Pham, Lan Zeng, Tonoy K Das, Talon Mack, Tong Lin,** and **Hakan Kadioglu**, were awarded 2019-20 ND Water Resources Research Institute Graduate Research Fellowships.

Keshab Thapa, a graduate student in the **Department of Civil and Environmental Engineering**, won the student poster competition at the 2019 Engineering Mechanics Institute Conference held at the California Institute of Technology.

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

COE STAFF LUNCHEON

We're excited to invite the CoE staff to the **2019 CoE Staff Luncheon** on Tuesday, August 13 from 11:30 a.m. – 1:30 p.m. in the Memorial Union Mandan Room. The event will include an update on the State of the College from Dean Kessler and an opportunity for you to ask questions.

Invitations were sent out as an Outlook meeting request. Please RSVP by July 16. We hope to see you there!

FACULTY AWARD NOMINATIONS

Nominations are now being accepted for 2019-20 faculty awards processed through the Office of the Provost.

Nominations may be submitted by faculty, staff, students, alumni, and administrators, materials should be sent by email to ndsu.provost@ndsu.edu. For descriptions of each award, criteria, and nomination materials, please see the [awards web page](#).

The Faculty Awards and Recognition Committee will review all nominations and select finalists for each award based upon the candidate's nomination materials after the stated deadline. Award recipients will be honored at the annual Celebration of Faculty Excellence.

PROMOTION, TENURE AND EVALUATION MATERIALS

The 2019-20 Promotion, Tenure, and Evaluation (PTE) Materials are now available to access from the [Promotion and Tenure website](#). This website contains the NDSU PTE Timeline, Guidelines for Promotion and Tenure Portfolio Preparation, Probationary Period Extension Form, Policy and Procedure Checklist, the Portfolio Cover Sheet, and information on University-Wide PTE Advisory Committee.

Portfolios are due to the Office of the Provost no later than December 19, 2019. If you have any questions regarding PTE, please contact [Canan Bilen-Green](#).

FUNDING OPPORTUNITIES

NDSU Impact Fund

The NDSU Foundation and Alumni Association Grants Committee is now accepting applications for the Impact Fund Grant Program for the 2019 academic year. The application deadline is **Monday, August 5, by 5 p.m.**

[The NDSU Impact Fund Grant Program](#) provides funding for projects that have a direct and positive impact on the lives of students. Annual contributions from alumni and friends of the University support this fund. Applications are accepted from faculty, staff and recognized student groups. The Impact Grant Fund Program offers grants of \$20,000 to \$75,000.

Find the application form and additional information for The NDSU Impact Grant Program at the NDSU Foundation website: <https://www.ndsufoundation.com/impact-fund>.

For any further questions, please email Jennifer Reinhold, Grants Committee Liaison, at jennifer@ndsualumni.com.

RECENTLY SUBMITTED PROPOSALS

- Yao Yu (PI), Zhili Gao (CPI). Needs Assessment of Low-Income North Dakota Individuals and Families. \$6,000 from The Consensus Council, Inc. 09/01/2019 – 12/31/2019.
- Dilpreet Singh Bajwa (PI). Engineering Distillers Dry Grain With Solubles to Develop Formaldehyde-Free Binderless Biocomposites. \$194,440 from the National Institute of Food and Agriculture. 01/02/2020 – 12/31/2022.
- David Grewell (PI). IUCRC/UIDP ISU Fund Relocation. \$62,205 from the National Science Foundation. 06/15/2019 – 08/15/2019.
- Long Jiang (PI), Mijia Yang (CPI), Zhibin Lin (CPI). A Novel Permanent/Temporary Dual-Use Pavement Marking Material with Advantages of Self-Reparability and Easy Removability. \$151,756 from the ND Department of Transportation. 09/01/2019 – 08/31/2020.
- Halis Simsek (PI). Impact of Groundwater Depth and Groundwater Salinity on the Field Peas Growth, Yield, and Other Quality Parameters Using Lysimeter Method in the Field Condition. \$66,660 from the Agricultural Research Service. 01/01/2020 – 12/30/2021.

RECENT PUBLICATIONS

For 2019, 60 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:

- Le, Trung B., Masoud G. Moghaddam, B. Tucker Woodson, and Guilherme J. M. Garcia. 2019. “Airflow Limitation in a Collapsible Model of the Human Pharynx: Physical Mechanisms Studied with Fluid-Structure Interaction Simulations and Experiments.” *Physiological Reports* 7 (10): e14099. <https://doi.org/10.14814/phy2.14099>.
- Shojaeiarani, Jamileh, Dilpreet Bajwa, Long Jiang, Joshua Liaw, and Kerry Hartman. 2019. “Insight on the Influence of Nano Zinc Oxide on the Thermal, Dynamic Mechanical, and Flow Characteristics of Poly(Lactic Acid)- Zinc Oxide Composites.” *Polymer Engineering and Science* 59 (6): 1242–49. <https://doi.org/10.1002/pen.25107>.
- Wan, Meihua, Pouya Amrollahi, Dali Sun, Christopher Lyon, and Tony Y. Hu. 2019. “Using Nanoplasmon-Enhanced Scattering and Low-Magnification Microscope Imaging to Quantify Tumor-Derived Exosomes.” *Journal of Visualized Experiments*, no. 147 (May): e59177. <https://doi.org/10.3791/59177>.
- Zeng, Aaron, Sheng Liu, and Yao Yu. 2019. “Comparative Study of Data Driven Methods in Building Electricity Use Prediction.” *Energy and Buildings* 194 (July): 289–300. <https://doi.org/10.1016/j.enbuild.2019.04.029>.

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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