FROM THE DEAN

Budget Efficiencies

This afternoon, I, and several members of the College Leadership Team, will be driving to Minneapolis to attend the 2019 Minnesota National College Fair. With representatives from over 300 different colleges and universities, this is one of the largest college fairs in the country. We’ll be spending Wednesday and Thursday morning at the NDSU exhibit talking with prospective students about all of the opportunities the College of Engineering at NDSU has to offer. NDSU always has a large presence at this event, and having faculty, department chairs, associate deans, and deans at the fair sends a strong message to the prospective students about the student focused nature of NDSU. With the university’s enrollments dropping in recent years, these types of recruiting activities are all the more important.

One impact of falling enrollments is the strain it puts on the university’s budget. Perhaps for that reason each college was recently asked by the Office of the Provost to participate in a budgeting exercise where we will submit a significantly reduced budget. This is only an exercise, and does not suggest that the reduced budgets would be accepted. However, it may be useful in identifying some opportunities to be better stewards of the resources in the college. If you have any thoughts or suggestions regarding improving efficiencies, eliminating waste, university priorities, programs, realignments, etc. please let me know either in person or by email. If you would like to submit your ideas anonymously, you can send them through campus mail.

IN THE NEWS

NDSU engineering event to host moms, daughters

NDSU faculty among group honored by governor

NDSU research center turning ag waste into bioplastics

Bioplastics research at NDSU (Podcast)

CONGRATULATIONS

Please let College Happenings know about honors, awards, new grants and other announcements so we can share them with other faculty and staff.
CONSTRUCTION MANAGEMENT AND ENGINEERING CHAIR CANDIDATE SEMINARS

Each of the four finalists will be giving a presentation on their research and teaching accomplishments and interaction with industry and students. The seminars are open to all members of the College of Engineering.

Hazem Elzarka, University of Cincinnati

- Monday, October 7 from 12:00 – 1:30 p.m. in the Family Life Center Room 124

Zhigang Shen, University of Nebraska-Lincoln

- Thursday, October 10 from 3:30 – 5:00 p.m. in Loftsgard Auditorium (Room 114)

COE FACULTY COUNCIL

Please mark your calendars for the CoE Faculty Council Meetings for the 2019-2020 academic year.

- October 16th (Wed) 3:00 – 4:00 PM QBB 104 (auditorium)
- November 13th (Wed) 3:00 – 4:00 PM QBB 104 (auditorium)
- December 10th (Tue) 12:30 – 1:30 PM Prairie Rose Room, Memorial Union
- January 29th (Wed) 3:00 – 4:00 PM QBB 104 or CME Auditorium
- February 18th (Tue) 12:30 – 1:30 PM Prairie Rose Room, Memorial Union
- March 11th (Wed) 3:00 – 4:00 PM QBB 104 or CME Auditorium
- April 14th (Tue) 12:30 – 1:30 PM Prairie Rose Room, Memorial Union
- May 6th (Wed) 3:00 – 4:00 PM QBB 104 or CME Auditorium

UPCOMING EVENTS

Friday, October 5, Introduction to the North Dakota Corn Council. This ABEN Seminar features Jean Henning, Executive Director of the North Dakota Corn Utilization Council. 3:00 p.m. ABEN 201

Thursday, October 10, In Our Hands: The Campaign for North Dakota State University. Join the campus community for the public launch of the largest capital campaign in the history of NDSU. 4:15 p.m. at the Sanford Health Athletic Complex.

Friday, October 11, College of Engineering Homecoming Showcase. 11:00 a.m. – 1:00 p.m. in the Memorial Union Great Plains Room. Register Here.

Thursday and Friday, October 17 and 18, Discover NDSU. The largest event of the year for high school juniors and seniors.

Thursday, October 17, Tools and Weapons: The Promise and Peril of the Digital Age presented by Microsoft President Brad Smith. 3:00 – 4:00 p.m. at the McGovern Alumni Center. Click this link to register. Space is limited.

Thursday, October 24, Red River Valley ASABE Sectional meeting. The registration deadline is 11:59 p.m. on Tuesday, October 22, 2019. Register Here.

Friday October 25, Development of Novel Shear Thickening Fluid Impregnated Biocomposite Body Armor. This Mechanical Engineering Seminar is presented by M.S. candidate Joseph Fehenbach. 12:00 – 12:50 p.m. in Dolve 118.
BY THE NUMBERS

Fall 2019 enrollment numbers are now official. This chart shows totals for the College of Engineering over the last 10 years. The Department of Computer Science has been included in historical data for comparison purposes.

![Figure 1. Enrollment by Academic Year (Fall Terms)](image)

FUNDING OPPORTUNITIES

NSF: Smart and Connected Health

The goal of the interagency Smart and Connected Health (SCH): Connecting Data, People and Systems program [NSF 18-541] is to accelerate the development and integration of innovative computer and information science and engineering approaches to support the transformation of health and medicine. Approaches that partner technology-based solutions with biomedical and biobehavioral research are supported by multiple agencies of the federal government including the National Science Foundation (NSF) and the National Institutes of Health (NIH). The purpose of this program is to develop next-generation multidisciplinary science that encourages existing and new research communities to focus on breakthrough ideas in a variety of areas of value to health, such as networking, pervasive computing, advanced analytics, sensor integration, privacy and security, modeling of socio-behavioral and cognitive processes and system and process modeling. Effective solutions must satisfy a multitude of constraints arising from clinical/medical needs, barriers to change, heterogeneity of data, semantic mismatch and limitations of current cyberphysical systems and an aging population. Such solutions demand multidisciplinary teams ready to address issues ranging from fundamental science and engineering to medical and public health practice.

Application Deadline: December 11, 2019

ARPA-E: Performance-based Energy Resource Feedback, Optimization, and Risk Management (PERFORM)

The Advanced Research Projects Agency–Energy (ARPA-E) announced a new Funding Opportunity to quantify and manage risk on the grid. The Performance-based Energy Resource Feedback, Optimization, and Risk Management (PERFORM) projects will develop a transformative and disruptive risk-driven grid management paradigm that optimally utilizes all assets to reduce costs and improve reliability.

For more information on ARPA-E’s PERFORM program, click here. Additional information, including the full FOA and how to find project teaming partners, is available on ARPA-E’s online application portal, ARPA-E eXCHANGE.
RECENTLY FUNDED GRANTS

- Jordi Estevadeordal (PI), Yildirim B Suzen (CPI). Advanced Optical Diagnostics for Supersonic/Hypersonic Wind Tunnel Research at NASA. $25,000 from the National Aeronautics and Space Administration. 08/16/2019 – 08/15/2020.
- Benjamin Davis Braaten (PI). Chip-Based ADS-B for High Density, Low Altitude UAV Operations. $12,097 from the National Aeronautics and Space Administration. 08/15/2019 – 12/31/2019.
- Ravi Kiran Yellavajjala (PI). Polyol soy-protein based coating for protection against chloride-ion attack. $32,000 from the MN Soybean Research and Promotion Council. 01/01/2020 – 12/31/2020.
- Alan R Kallmeyer (PI), Chad A Ulven (CPI). Design and Development of Durable Adhesive Joints. $150,000 from PPG Industries. 09/01/2019 – 09/30/2020.
- Dinesh Katti (PI). NDSU EPSCoR Internal Funding – Equipment Award. $6,595 from ND EPSCoR. 09/26/2019 – 05/31/2020.
- Xuefeng Chu (PI). NDSU EPSCoR Internal Funding – Student Travel Award. $2,000 from ND EPSCoR. 09/26/2019 – 05/31/2020.
- Zhibin Lin (PI). NDSU EPSCoR Internal Funding – Student Travel Award. $1,000 from ND EPSCoR. 09/26/2019 – 05/31/2020.
- Yao Yu (PI), Quifeng Zhang (CPI), Zhibin Lin (CPI). NDSU EPSCoR Internal Funding – Seed Award. $10,000 from ND EPSCoR. 09/26/2019 – 05/31/2020.
- Nita Yodo (PI), Zhibin Lin (CPI). NDSU EPSCoR Internal Funding – Seed Award. $10,000 from ND EPSCoR. 09/26/2019 – 05/31/2020.
- Ravi K. Yellavajjala (PI), Chad Ulven (CPI), Yao Yu (CPI). NDSU EPSCoR Internal Funding – Seed Award. $10,000 from ND EPSCoR. 09/26/2019 – 05/31/2020.
- Wenjie Xia (PI). NDSU EPSCoR Internal Funding – Seed Award. $10,000 from ND EPSCoR. 09/26/2019 – 05/31/2020.
- Di Wu (PI). NDSU EPSCoR Internal Funding – Seed Award. $10,000 from ND EPSCoR. 09/26/2019 – 05/31/2020.
- Danling Wang (PI). NDSU EPSCoR Internal Funding – Seed Award. $10,000 from ND EPSCoR. 09/26/2019 – 05/31/2020.
- Dali Sun (PI). NDSU EPSCoR Internal Funding – Seed Award. $10,000 from ND EPSCoR. 09/26/2019 – 05/31/2020.
Shafiqur Rahman (PI). NDSU EPSCoR Internal Funding – Seed Award. $9,706 from ND EPSCoR. 09/26/2019 – 05/31/2020.

Ivan Lima (PI). NDSU EPSCoR Internal Funding – Seed Award. $10,000 from ND EPSCoR. 09/26/2019 – 05/31/2020.

Kalpana Katti (PI), Dinesh Katti (CPI). NDSU EPSCoR Internal Funding – Seed Award. $10,000 from ND EPSCoR. 09/26/2019 – 05/31/2020.

Abdul-Aziz Banawi (PI), Jerry Gao (CPI). NDSU EPSCoR Internal Funding – Seed Award. $9,888 from ND EPSCoR. 09/26/2019 – 05/31/2020.

M. Zubair Malik (PI). NDSU EPSCoR Internal Funding – Seed Award. $9,999 from ND EPSCoR. 09/26/2019 – 05/31/2020.

RECENTLY SUBMITTED PROPOSALS

- Amiy Varma (PI). The Impact of Deferred Maintenance in Minnesota. $90,000 from the MN Department of Transportation. 07/01/2020 – 06/30/2022.
- Amiy Varma (PI). Pedestrian User Experience at Roundabouts. $120,000 from the MN Department of Transportation. 07/01/2020 – 06/30/2022.
- Amiy Varma (PI). Balancing Roundabout Design and ADA Accessibility. $105,000 from the MN Department of Transportation. 07/01/2020 – 06/30/2022.
- Long Jiang (PI). 3D Printing of Biobased High-Performance Thermosetting Composites with Continuous Cotton Yarn as Reinforcement. $43,414 from Cotton Incorporated. 01/01/2020 – 12/31/2021.
- Kalpana Katti (PI), Dinesh R Katti (CPI). Design of Humanoid Testbeds of Breast Cancer Bone Metastasis. $75,000 from the National Institutes of Health. 11/01/2019 – 08/31/2020.
- Trung Bao Le (PI). Dynamics of Particle-Laden Water Droplets in Water-In-Oil Emulsion. $110,000 from the American Chemical Society. 09/01/2020 – 08/31/2022.

RECENT PUBLICATIONS

For 2019, 101 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:

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](mailto:kyle.bosch@ndsu.edu) to submit items for *College Happenings*.

Follow the College of Engineering on social media.