

# COLLEGE HAPPENINGS

July 24, 2018

## FROM THE DEAN

### Strategic Planning

This weekend, with some guests that were visiting my family from out of town, I visited the Hjemkomst Center in Moorhead. There we saw the Hjemkomst Viking Ship, a full scale replica of a 9th century Viking ship discovered in Norway. The idea of building the ship was borne by a local man named Robert Asp who died of leukemia shortly after its maiden voyage throughout Lake Superior in 1980. His goal was to sail the ship to Norway, and in 1982 Asp's three sons and daughter sailed the ship from Duluth to Oslo, completing their father's original dream. What struck me about the story was the singular focus that Asp and his family had for building the ship and making the homecoming voyage to Norway (Hjemkomst means "Homecoming" in Norwegian). They had a clear vision and mission which drove each of their decisions along the journey.

In an analogous way, the College of Engineering is commencing a journey, but we first have to define our destination – our vision for the college. However, defining where we want to take the college is just the first step. We also have to determine where we are right now, our starting point, by assessing our current state and core values, and how we will get there through clearly defined outcomes with accountability, and measurable key performance indicators (KPIs) for tracking our progress. Developing these five key elements – vision, core values, defined outcomes, accountability, and KPIs – is the process of strategic planning.

I am excited to announce that we will soon be engaging in strategic planning for the College of Engineering. To guide us in this process, we have partnered with Sagency, a consulting group based here in Fargo. We will be working with Tom Iverson and Mike Meagher from Sagency.

All of you will be asked to participate in an online survey. We are conducting this survey to get a better understanding of our current environment in the college. In addition to the survey, Sagency will also be conducting face-to-face or phone interviews with a sample of our faculty, staff, advisory board members, students, and other stakeholders. If you are interviewed, they will ask you questions about our strengths as a college, areas for improvement, culture, workplace, strategy, engagement, and other ideas you have for making our college even better. Your insights are important to us and the interview and survey offers a great opportunity to express those insights

To continue to share a successful future, clear and honest communication is critical. The conversations and survey will be fully managed by Sagency. Please be aware that your responses to their questions during the interview and on the online survey will be kept completely anonymous – we will not be able to trace individual responses back to you nor do we want to. We are invested in this team and our collaborative growth throughout this candid process.

Ultimately, what we will be able to see is combined data for the entire team. Please be thoughtful, honest and candid during your time with Tom or Mike. We can all be proud of where we are today, but we recognize we still have work to do.

Our goal is to improve our college and take it to the next level. It is critical we get accurate feedback from all. Your candor will guide us in identifying the most critical areas on which to focus.

Once the data is in, Sagency will work with the college leadership team (dean, associate dean, chairs and directors) on facilitating the strategic plan for the college, starting with an off-site planning retreat of the college leadership team August 12-14. I am looking forward to the process and welcome your input. It's going to be exciting.



## IN THE NEWS

[NDSU hosting international renewables symposium](#)

[Engineering grad named Moore Engineering president](#)

[Jayse McLean starring on, off baseball field at North Dakota State](#)

[NDSU tests new 'spray drone': 'Smart farm' concept addresses small weed patches](#)

## CONGRATULATIONS

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

## FACULTY NEWS

**Matt Stone**, Assistant Professor in Construction and Management Engineering, is resigning effective August 1, 2018 to accept a Design Engineer position in Houston, TX. We wish him all the best in his future endeavors.

## ABEN FACULTY SEARCH SEMINARS

Tuesday, July 24: **Xin (Rex) Sun – North Dakota State University**

- Teaching seminar – 10:00 a.m. ABEN building room 224
- Research seminar – 2:00 p.m. ABEN building room 224

Thursday, July 26: **Aaron Franzen, South Dakota State University**

- Teaching seminar – 10:00 a.m. ABEN building room 224
- Research seminar – 2:00 p.m. ABEN building room 224

Tuesday, August 7: **Mohammadmehdi (Reza) Maharlooei, Shahid Bahonar University, Iran**

- Teaching seminar – 10:00 a.m. ABEN building room 224
- Research seminar – 2:00 p.m. ABEN building room 224

## UPCOMING EVENTS

Friday, August 17<sup>th</sup>, **NDSU Faculty Conference**. [Register here](#).

## FUNDING OPPORTUNITIES

The North Dakota NASA Established Program to Stimulate Competitive Research (EPSCoR) is soliciting both research proposals and travel proposals from faculty at NDSU to conduct NASA relevant research in one or more RFAs that are designed to promote and expand particular NASA research sub disciplines in North Dakota. Travel awards will be made to collaborate with NASA centers.

One of the primary goals of the RFA research emphasis and the NASA EPSCoR program is to assist faculty in developing research programs that can be funded outside of the NASA EPSCoR program in the future. Therefore, proposers should specifically include a plan to develop and expand their proposal into an independently funded research group beyond the timeframe of this funding opportunity.

The period of performance for both travel awards and research awards is: August 16, 2018 - May 5, 2019.

Seed research proposals and travel award proposals are due at noon on August 10, 2018.

The full research RFP, travel RFP, additional details, and downloadable forms can be found [here](#).

## RECENTLY SUBMITTED PROPOSALS

- Di Wu (PI). Distributed Protection and Restoration Schemes for Integration of Large-scale Solar PV Installations and Responsive Loads: Design, Testbed, Proof of Work and Impact Studies. \$599,613 from the Department of Energy. 01/01/2019 – 12/31/2021.
- Jordi Estevadeordal (PI), Yechun Wang (CPI), Yan Zhang (CPI), Yildirim B Suzen (CPI). High Repetition Rate Laser System for Spatially and Temporally Resolved Flow Measurements. \$358,338 from the Department of Defense. 06/15/2019 – 06/15/2028
- Kenneth Helevang (PI). Energy Education Website. \$8,998 from the ND Department of Commerce. 10/01/2018 – 03/20/2019.
- Akm Bashir Khoda (PI). CAREER: Dip Coating of Interlayer Metal Particulate on Wire Substrate for TLP Bonding. \$400,000 from multiple sponsors. 07/01/2019 – 06/30/2024.
- Houjun Yan (PI). Engineering Microclimates to Improve Efficiency and Sustainability of Cold-climate Residential Heating. \$498,998 from the National Science Foundation. 06/18/2019 – 06/17/2024.
- Na Gong (PI). CAREER: Power-efficient Embedded Memory: From Hardware to Data and User. \$844,513 from the National Science Foundation. 03/01/2019 – 02/28/2024.
- Dharmakeerthi Nawarathna (PI). CAREER: Electric Fields Assisted Fluorescence Enhancement for Epigenetic Biomarker Detection in Circulating Blood Samples: Diagnostic and Personalized Treatment Strategies for Cancer, Obesity and Addiction to Opioids. \$502,976 from the National Science Foundation. 01/01/2019 – 12/31/2023.
- Dong Cao (PI). CAREER: Ultra-high-density Power Delivery Architecture for Transportation Electrification (UPDATE). \$500,000 from the National Science Foundation. 05/01/2019 – 05/15/2024.
- Nita Yodo (PI). S&AS: FND: Cooperative Repair for Resilient Swarm Autonomous Systems in Uncertain Extended Missions. \$303,255 from the National Science Foundation. 01/01/2019 – 12/31/2022.
- Zhibin Lin (PI). CAREER: Structural and Thermodynamic Properties of Multifunctional Dynamic Breathing Building Envelopes for High Performance Buildings. \$500,000 from the National Science Foundation. 05/01/2019 – 04/30/2020.
- Danling Wang (PI), Qifeng Zhang (CPI). A Novel Approach of Measuring Body Fat Loss and Monitoring Weight: A Smart Weight Scale on a Chip. \$56,865 from the NDSU Foundation & Alumni Association. 10/01/2018 – 06/01/2019.

## RECENT PUBLICATIONS

For 2018, 66 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:

- Chen, Xiaowei, Seyed Alireza Pourbakhsh, Jingyan Fu, Na Gong, and Jinhui Wang. 2018. “A Novel Hybrid Delay Unit Based on Dummy TSVs for 3-D On-Chip Memory.” *IEEE Transactions on Very Large Scale Integration (Vlsi) Systems* 26 (7): 1277–89. <https://doi.org/10.1109/TVLSI.2018.2809961>.
- Petersen, Derek, Zhibin Lin, and Jian Zhao. 2018. “Shear Behavior of Single Cast-in Anchors in Plastic Hinge Zones.” *International Journal of Concrete Structures and Materials* 12 (1). <https://doi.org/10.1186/s40069-018-0251-x>.
- Shirzadifar, Alimohammad, Sreekala Bajwa, Seyed Ahmad Mireei, Kirk Howatt, and John Nowatzki. 2018. “Weed Species Discrimination Based on SIMCA Analysis of Plant Canopy Spectral Data.” *Biosystems Engineering* 171 (July): 143–54. <https://doi.org/10.1016/j.biosystemseng.2018.04.019>.
- Zhang, Yan. 2018. “Effects of Distributed Leading-Edge Roughness on Aerodynamic Performance of a Low-Reynolds-Number Airfoil: An Experimental Study.” *Theoretical and Applied Mechanics Letters* 8 (3): 201–7. <https://doi.org/10.1016/j.taml.2018.03.010>.

*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.

