

IME NEWSLETTER



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Dates to Remember:

- Sept. 25th Fall Career Expo
- Oct. 10th NDSU Campaign Kick-off
- Oct. 7th-12th Homecoming Week
- Oct. 11th IME Advisory Board Meeting & Engineering Homecoming Showcase
- Nov. 14th Vettel IME Family Fellowship Announcement
- Dec. 19th Order of the Engineer Induction Ceremony
- Dec. 20th Winter Commencement

Cover Story: Meet the Chair, Dr. David Grewell

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Dr. Grewell joined NDSU as the department chair of the IME department in August of 2018. Grewell earned his bachelor's, master's, and doctoral degrees in welding engineering at Ohio State University. He had previously spent 14 years in industry working at Edison Welding Institute and Emerson Electric. His career in academia began at Iowa State University, where he played a major role as the founder of a National Science Foundation (NSF)/Industry/University Cooperative Research Center called the Center for Bioplastics and Biocomposites (CB²). The idea for the Center was a joint effort that originated from Grewell's time at Iowa State University where he met Dr. Michael Kessler. "Dr. Kessler and I were both on the Biopolymer and Biocomposites Research Team and the idea hatched from there.", stated Grewell. CB² has partner sites at Iowa State University, Washington State University, the University of Georgia. NDSU is now the lead site, as Dr. Grewell remains the Center Director.

As an official university site of an NSF/IUCRC, NDSU received an initial award of \$150,000 with an expected additional \$150,000 in 2020. With CB² quickly approaching 30 member companies, the center has doubled in size within the last year. In addition to CB², Dr. Grewell has been involved with the launch of a university-wide Industry-University Partnerships center (*i*-UPs) with Jane Schuh, VP of Research, working closely with Dr. Grewell to launch the program, which aims to mirror the structure of partnerships between industry and academia in CB².

As a kid, David Grewell picked up on the engineering mindset quickly. "Growing up on a farm like I did, you get exposed to a lot of problem solving," stated Grewell. He was always fascinated by fixing and/or improving things, which sparked an interest in engineering. Grewell knows that like the majority of people, his failures have taught him the most. "I've learned the most in instances where I had no idea where to start.", stated Grewell. Grewell believes that breaking a complicated issue down into simpler components are the times in which one learns the most.

Later in life, while working in industry, Grewell gained experience that he knew would be valuable to students. "Understanding how my education helped me throughout my career in industry gave me good perspective to bring back academia and the classroom. It was more of a process than a light bulb moment", stated Grewell. NDSU had one aspect in particular that attracted Grewell to teach here. "The first thing that caught my attention was the student focus. I was excited about the opportunity to interact with students 1 on 1 and work to grow the research program in the department.", stated Grewell.

As Grewell's first year as chair comes to a close, he can be proud of the many accomplishments the department has achieved this past year. He plans to continue his efforts in increasing the department's enrollment by getting the word out to students what industrial and manufacturing engineering is all about, mentoring junior faculty, and providing leadership for the department. Dr. Grewell is also deeply vested in growing the number of industry members in CB², and getting I-UPs up and running to help support the over-all success of the University.

DEPARTMENT NEWS...

New Website:

The IME department website has a new look! The website design was updated and even got some new content as well. If you want to stay on top of the latest happenings within the department, make sure to check out our Facebook page (@NDSU.IME)



Spring Graduates:

Congratulations to all of our graduates!

Spring/Summer Undergrads:

IEM – 17

Mfg – 3

Grad students:

Tanzina Afrin and Mahmoud Mostafa received their masters. Students Shah Limon, AMM Mazmul Ahsan and Md Ahasan Habib received their PhDs and are now working as tenure track faculty members on the east coast.



Pictured left to right: Shah Limon, David Grewell, Md Ahasan Habib



Plant Tours:

For many students, the highlight of IME 435 (Plastics and Injection Molding Manufacturing) was finishing the semester with a tour of an industry site. ComDel Innovation, in Wahpeton, ND, hosted the class and gave them some valuable insight into the logistics of running manufacturing operations.

Cram Jam 2019

This past spring faculty and teaching assistants gathered to host undergraduate students for what the department hope to be an annual “Cram Jam.” With finals just around the corner, the department offered help in the form of guidance with final test preparation and FREE pizza, pop and goodies! The Cram Jam was open to all College of Engineering students. Students stopped to grab a bite to eat and to ask about any big questions they had while studying for their final exams. This event was sponsored by the Society of Manufacturing Engineers, ISE, and the IME Department.



AWARDS & RECOGNITION...

Staff Awards: Beth Dahl & Dr. Grewell

Beth Dahl was not only nominated for the NDSU 2019 Staff Recognition award, but she won. NDSU President, Dean Bresciani, presented Dahl with the award at the Staff Recognition social in May of 2019. Dahl has gone above and beyond the call of duty time and time again to ensure the needs of NDSU's students and faculty are met.



Beth Dahl & President Bresciani



Dean Kessler, Dr. Grewell & President Bresciani

David Grewell was awarded a Walter B. Booth Distinguished Professorship. Grewell joined NDSU as IME chair on August 1st. "One of my goals is to serve as a bridge connecting industry, government and NDSU and to mentor researchers who want to engage extramural and nongovernmental funding sources," Grewell said. "I also have a deep personal appreciation for the commitment of land grant institutions being inclusive and preparing the future workforce to meet the needs of the state and region."

Sharaki Awarded SRE Scholarship & Glomoski Best Paper

Each year, the Society of Reliability Engineers (SRE) gives two scholarships for students working in the area of Reliability Engineering. The two students are selected for this award after going through rigorous review of nationwide applications. Ameneh Forouzandeh Shahraki, IME graduate student working under Dr. Om Yadav, was fortunate enough to receive one of the SRE scholarship awards. As a part of the award, SRE covered the entire expense for Ameneh to attend Reliability & Maintainability Symposium (RAMS) and present her paper. The award was presented by SRE President Dr. Ed Pahl, Chair of Industrial and Systems Engineering Department at University of Arkansas. In addition to receiving the scholarship award, Ameneh was presented with the Glomoski Best Paper Award for her collaborative work on a paper with Dr. Om Yadav. They presented their paper titled "Selective Maintenance Optimization for Multi-state Systems Operating in Dynamic Environments."



Second from the left: Dr. Yadav and Ameneh Shahraki



Satpal Wadhwa

Satpal Awarded Best Agricultural Transportation Paper Award

Satpal S. Wadhwa is an Industrial and Manufacturing Engineering Ph.D. candidate working under Dr. Kambiz Farahmand. He is also a graduate research assistant with NDSU's Upper Great Plains Transportation Institute. At the 2019 Annual Transportation Research Forum, he was fortunate enough to have received the Best Ag Transportation Paper Award. His paper, "An Agent Based Simulation Model for Inland Hard Red Spring Wheat to Determine the Impact of Market Factors on Wheat Flows" described research that explored the impact that market factors, such as rail rates and farm storage costs, have on market flows. The research was supported by the North Dakota Wheat Commission.

STUDENT NEWS...

Student Organizations



IME students are active in several student organizations sponsored by the department. The IISE student chapter attended the North Central Region IISE spring conference in Madison, WI. (pictured upper left). Pictured from left to right is, Dr. Grewell, who attended the SWE banquet with IME SWE members. SME (the Society of Manufacturing Engineering) is also gaining members to form a chartered student chapter and to the right, Christy Strong from Boston Scientific, is pictured with IISE and SWE members as their guest speaker.



Tiahna Burian, making a difference!

Tiahna Burian, IME senior at NDSU is making an impact within our Fargo Community! Tiahana competed in January for the Miss ND International pageant and was also nominated for a YWCA Woman of the Year award for her teenage mental health awareness work and focus on teenage suicide prevention. Tiahna's interest in advocating for mental illness grew organically when a former teammate and friend completed suicide in May, 2016- one month before high school graduation. Tiahna has also served as President for the Student College Board at Imagine Thriving, a non-profit organization in Fargo, ND that focused providing mental health education, prevention and advocacy for youth and young adults until recently combining with Lutheran social Services of ND. Way to Go Tiahana!



2019 SPRING CAPSTONE PROJECTS...

Speaker: Steve Johnson

Steve Johnson, NDSU alumni from the IME department was a guest judge for the spring 2019 senior capstone projects. Johnson earned a Bachelor of Science in Industrial Engineering – North Dakota State University (1983) and a Master of International Management – University of St Thomas (1993). Steve has held senior positions in local manufacturing firms and has worked on projects in Canada, Europe, and China. Steve currently is the President/Owner of Code Welding which has earned a reputation as a high-quality metal fabrication organization in Blaine, MN.

A big thanks to Steve for volunteering his time and talents for judging this year's projects and for being our guest speaker at the capstone banquet!

IME students finishing their senior capstone wrap up the semester in late April with a full day of presentations. These presentations are judged by a panel of experts in the field and awards are given out at the capstone banquet. Congratulations goes out to D&M Industries on finishing in third place, TSR Parts on taking second place, and Border States for bringing home the first place title.



2019 Senior Capstone Banquet at the McGovern Alumni Center with Instructor Dennis Steinman

Company	Project	Students
Fast Manufacturing	Machine Design and Process Improvement	Sopan Seth, Hassan Farah, Jake Gerecke and Matthew Schiroo
D&M Industries	Facility Layout Improvement	Bailey Kemper, Tiahna Burian, Lauren Kopel and Mitchell Roberts
SUPERVALU Distribution	Facility 5S Analysis and Implementation	Jason Cary, Reid Groninger, Tristan Benson, Jacob Riebel, and Camron Roehl
TSR Parts	R&D Manufactured	Timothy Straus, George Lagat, Samuel Andrusick and Taylor Farber
BTD Manufacturing	Material Handling Productivity Improvement Analysis	Andrew Roth, Lucas Bobier, Jason Spano, Mohammed Bin Jadnan and Hassan Aimuzel
Felling Trailers	Decal Printing In-House Analytics	Ethan Lochner, Nathan Maciei, Theodore Zipoy, Jacob Crosby and Morteza Khavari
BSE Supply Chain Solutions	Warehouse Inventory Slotting System Analysis	Macensie Lange, Olivia Gravel, Lucas Johnson, Anna Bieganeck, and Joseph Garty
Action Fabrication	ROI Analysis on New Equipment Purchase	Matthew Pavlicek, William Spaulding, Luke Selken, Shi Ho and Taylor Wain

ADVISORY BOARD HAPPENINGS...

New Members

The spring Advisory Board Meeting was held on April 26th of 2019. Two new board members, Michael Mathers and Brett Winkelman, were voted onto the board.



Michael Mathers graduated in December of 2010 from NDSU with a major in Industrial Engineering and Management. Upon graduation, Michael accepted a position with Bobcat Doosan located in West Fargo working as a Sourcing Specialist. He enjoyed the wide variety of topics – working on quality projects with suppliers and negotiating contracts which has allowed him to travel the world. After four years with Bobcat, Michael accepted a Project Manager position with a small local company in Fargo called PKG Contracting. As a project manager he led the construction of water treatment facilities. Currently, Michael returned to Bobcat and is now a Sr. Sourcing Specialist.

Brett Winkelman graduated from IME/NDSU in 2009 and played for the Bison Basketball team as a scholarship athlete. Since then, he has played Basketball in Italy, Poland and Brazil. After returning to Fargo eight years ago, Winkelman decided to go back to school to receive his MBA at NDSU. On top of that, he landed a fantastic career position at Fargo Assembly Company where he has earned his position as President of the company.

New Officers

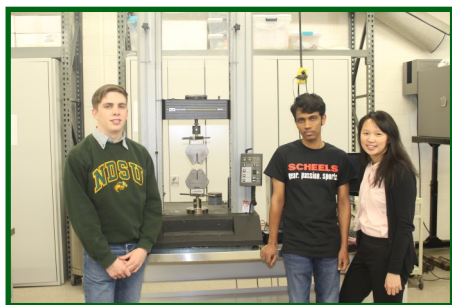
Nominations were held for Chair and Chair-elect. Derek Holt was voted and approved as the new Chairman of the Board. VerDale Herman was voted and approved as the Chair-elect. Both will serve two-year terms.

Carli Carrier has been chosen as the ex officio member of the IME student body to serve on the board.

RESEARCH/GRANTS...

ND EPSCoR Seed Grant

Dr. Yodo wrapped up a \$10,000 seed grant awarded to help start developing an innovative data-driven approach to resolve problems that prevent additive manufacturing from achieving replicable 3D printed projects.



David Hoffman, Arup Dey, Dr. Nita Yodo

Efforts to increase the number of grants in the department are underway. Christine Strohm, grant writer and CoE consultant, has been meeting with the junior faculty every month to help them hone their skills and Ben Deetz also helps the department with the submittal process. The number of proposals submitted by the department is up and there are some very promising awards coming up this fall!

Corn Council Grant

This summer, Dr. Grewell was awarded the "North Dakota Corn Council Multi Functional Biodegradable Mulch for Specialty Crop Production grant". The \$54,067.00 grant is set to start July 1st of 2019.

NSF Grant

Dr. Grewell, Co-PI received a \$300,000 IUCRC grant for Phase I of CB² (Center for Bioplastics and Biocomposites) which has close to thirty industry members.



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