

IME NEWSLETTER



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Dates to Remember:

- July 4 Independence Day Holiday (no classes, offices closed)
- August 4 Last day of summer classes
- August 21 Fall Classes begin at 4pm
- Career Expo: September 20
- Homecoming Week Sept. 25-30
- IME Advisory Board Meeting September 29
- Commencement December 15

COVER STORY: New Faculty Member: Dr. Mojahid Saeed Osman

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This spring we welcomed Dr. Mojahid Saeed Osman to our faculty. Prior to joining NDSU, Dr. Saeed Osman was a faculty member at the American University of Sharjah and King Fahd University of Petroleum and Minerals. He also worked in industry for ExxonMobil and Petronas. His research focuses on applied operations research, and linear and nonlinear optimization with specific interests in dynamic network flow modeling. His research and funded project efforts have been published in a number of highly-reputed peer reviewed international journals and presented in leading international conferences in his research area.



Dr. Saeed Osman relocated here in January from the United Arab Emirates. He left the country when the average temperature was 76 degrees to move to North Dakota where the average January temperature is a balmy 18 degrees. He arrived here first, with his family to follow later. Dr. Saeed Osman is the proud father of 5 boys. His oldest son began his freshman year here in January as a student in Biochemistry. Below you can read a little more about Dr. Mojahid Saeed Osman. We are very fortunate to have him as a faculty member in IME. Welcome Dr. Saeed Osman!

Tell us a little bit about your background.

I earned my Bachelor's degree in Mechanical Engineering with a concentration in Production Engineering, a Master's degree in Industrial and Systems Engineering, and a PhD degree in Industrial Engineering from North Carolina A&T State University. I have more than 13 years of prior teaching and research experience in academia from four universities in addition to several years of work experience in the oil industry.

How did you get into your field of research?

I got into my field of research in systems optimization and simulation modeling when I was conducting my undergraduate capstone project on simulation of a production line. I had to research and learn a high-level programming language to develop a simulation model from scratch. While studying in the MS and PhD programs of Industrial Engineering at North Carolina A&T State University, I had had opportunity to work on large-scale modeling problems and participate in different research projects related to applied operations research and optimization sponsored by government funding agencies such as DOD and DHS. These opportunities increased my interest in turning my passion for applied operations research, optimization, and simulation modeling into my main research area.

What attracted you to NDSU?

NDSU provides diverse opportunities for faculty and students to grow academically and personally. NDSU is attractive in that it is a research-based and student-focused university where faculty provide students with a world-class education and hands-on learning experience. It is truly attractive to join NDSU and become a part of a hundred-year legacy.

What classes are you teaching and what's one thing you hope students who take a class with you come away with?

This spring semester, I teach a simulation class for graduate and undergraduate students. I really hope that students appreciate the importance of simulation modeling in solving real-world problems in business and industrial systems safely and efficiently as it provides an important decision-making tool and valuable solutions by giving clear insights into complex systems. Hopefully, some students would be able to turn their deep understanding of simulation modeling into a career.

Tell us what you'll be doing in your role as Director of the Center of Quality, Reliability, and Maintainability Engineering?

As Director of CQRME, I will be working/leading the efforts to promote quality, reliability, and maintainability principles and practices within the academic and industrial communities, and provide outreach and research support to growing oil, wind energy, power system, manufacturing industries and other industrial sectors in North Dakota. Moreover, I will be fostering and undertaking collaborative research projects and educational programs with local companies and other universities to support university researchers to offer expertise and resources in the area of quality, reliability, and maintainability engineering relating to solving critical problems of concern to industry, such as the development of efficient methods to improve product quality and reliability, optimal maintenance plans, and optimal inventory management for repairable systems.

What do you like to do when you're not at work?

My interests outside of work include spending quality time with my family, watching TV, listening to news and music, and travelling.



INDUSTRIAL & MANUFACTURING
ENGINEERING


SOCIAL MEDIA CAMPAIGN

A Week in the Life.....


This year we've had the fortune of getting to see what life is like for both an undergrad and grad student in the IME program. Last fall, Alyssa Miiller took to Instagram to post various topics as she goes about her day to day life as a junior majoring in Industrial Engineering. This spring we were able to see how Sri Garapati spends time on campus as a grad student. Thank you both for allowing us to have a look into your lives. You can catch up on the content posted by Alyssa and Sri on our IME Instagram page.

LIFE AS AN IME STUDENT: Alyssa Miiller

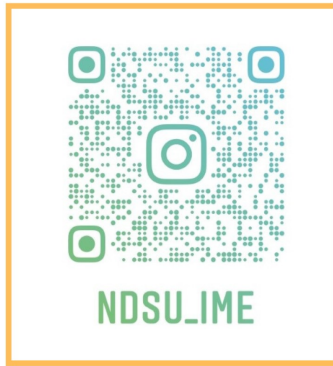
You can follow Alyssa this week on our IME Instagram page!



Alyssa is a junior in IME who transferred from Bismarck State. She has been accepted into the MBA accelerated program & loves to get involved. She serves as the President for Burgum Hall Government, and is a member of IISE and Chi Alpha.



When she's not studying or working, "I love to hang out with my friends, sing and go on drives and watch movies - especially musicals."



Life As an IME Grad Student



Meet Sri... a current PhD student in IME. Sri loves taking or posing for pictures. She also enjoys working out, but not waiting for the results!

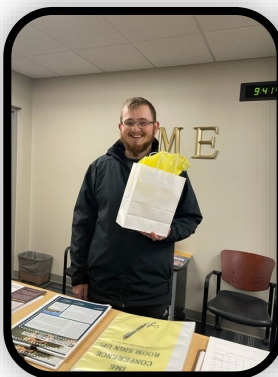
Sri Garapati

According to Sri, "Attention to detail is my way of working whether it be my professional/personal life. As a quality engineer I got a chance to put my "attention to detail" working style to professional use. This made me want to learn more about Manufacturing and Quality in an Industrial based environment."

Follow Sri the week of Feb. 6th on the IME Instagram account @NDSU.IME

Everybunny Loves Easter Egg Hunts

This spring we held our annual egg hunt. Students were able to find eggs filled with candy around the department. One clue was sent out each day for four days leading students to various locations to find a "golden egg". The following students were our big prize winners. Congratulations to our winners and thank you to all that participated!



Jacob Schwartz



Avery Jorgensen



Sri Garapati



Benjamin Joy



Letter from the Chair

It is with mixed emotions that I share the news of my departure from our esteemed department. After five remarkable years filled with growth, collaboration, and memorable achievements, I have accepted an opportunity as Dean of the Northern Illinois (NIU) College of Engineering and Engineering Technology. As I reflect on my time here, I want to express my deepest gratitude for the invaluable experiences and unwavering support I have received from each and every one of you.

During my tenure, our department has witnessed tremendous growth in various aspects. We have fostered a culture of collaboration and teamwork, which has allowed us to tackle complex challenges and achieve remarkable outcomes. Together, we have secured grants, furthered our research endeavors, and contributed to the advancement of our field. Our collective efforts have also led to enhanced student success and the availability of scholarships, opening doors of opportunity for aspiring scholars.

Among the highlights of our journey together, I take great pride in the growth of the NSF IUCRC CB2 center on sustainable materials. Our dedication and commitment to this initiative have yielded remarkable results, positioning us at the forefront of innovation in the field. Additionally, the successful launch and full operation of the NSF I-Corps hub with eight universities stands as a testament to our determination and entrepreneurial spirit.

While I look forward to the new chapter in my career, there are certain things I will deeply miss about this department. First and foremost, I will miss the incredible faculty and staff who have made me feel at home from the very beginning. Your support, expertise, and friendship have been instrumental in my personal and professional growth. I consider myself fortunate to have worked alongside such talented individuals, and I will forever cherish the connections we have formed.

I must also express my gratitude to the friends of the department, including the IAB, whose unwavering support has had immeasurable impacts on our students' outcomes. Your dedication to scholarship and support has paved the way for countless achievements, and I am honored to have been part of such a vibrant community. Furthermore, there are specific individuals who have left an indelible impression on me. Beth, you have been not only a colleague but a true friend and an inspiration. Your intelligence, hard work, and visionary mindset have been a constant source of admiration. Kambiz, I will forever be grateful for your friendship and steadfast leadership during challenging times. You have been a pillar of strength and a reliable confidant, and I cannot thank you enough. Last but certainly not least, I will miss our incredible students. They never ceased to amaze me with their exceptional talents and skills. It has been an absolute privilege to witness their growth, and I am confident that they will continue to shine brightly as they embark on their academic and professional journeys.

As I bid farewell, I want to emphasize how much I have learned from each and every one of you. The lessons in leadership and team building I have gained during my time here are invaluable, and I have no doubt that our department has a bright future ahead with the current staff and faculty. While I had planned on retiring at NDSU, life has a way of guiding us towards unexpected paths, and I embrace this new adventure with a mix of excitement and gratitude. Thank you all for the countless memories, the unwavering support, and the friendships that will endure beyond my departure. You have all contributed to making my time at this department truly remarkable. I have the utmost confidence that the department will continue to thrive, reaching even greater heights of success.

Wishing you all the very best in your future endeavors.

Warm regards,

Dr. David Grewell, Outgoing Chair



Visiting Students

This summer we had the pleasure of welcoming 3 students along with a mentor from Turtle Mountain Community College in Belcourt, North Dakota. The students were enrolled in IME 330 which is taught by Reza Maleki and Dan Whitney, in the IME department. Below is a brief bio from each student and their mentor.

Cody Guardipee: I am attending United Tribes Technical College in the pre-engineering program. I am currently here for the manufacturing process summer class, and so far it has been one of the most engaging, intriguing, and overall fun experiences. My goal/hope is to find out what my true calling is and make a career one day out of it. I have so much at my fingertips in terms of resources and things like a summer program at NDSU really help hone in on what I like, what I am good at, and what it would take to get there. This time at NDSU is beyond invaluable to me.



Jayce Archambault: I am from the Standing Rock Sioux Tribe. I attend United Tribes Technical College (UTTC) and currently have my (AS) in their Pre-Engineering program. I am currently pursuing a Business Administration (BS) degree at UTTC. I am at Aspire Academy @NDSU because I had an opportunity to learn about the manufacturing process from an engineering perspective. I wanted to keep my foot in the engineering door, since UTTC does not offer a 4-year in engineering. I plan on pursuing an electrical or petroleum engineering degree after I obtain my bachelors at UTTC. I am very grateful for the opportunity to learn at NDSU with the Aspire Academy.

Seth Belgarde: I'm an engineering student at Turtle Mountain Community College in Belcourt, North Dakota. I am here at NDSU as part of the ASPIRE program and am currently taking IME 330. After graduating with my associate's degree in engineering, I plan to attend NDSU for mechanical engineering. After I graduate, I am unsure of what I want to do. I am currently an intern at Los Alamos National Labs in Los Alamos, New Mexico. If I decide I like working there, I might decide to stay after I get a bachelor's degree. I have also thought about working for a private company developing high-performance automobiles or race cars.

Jerral Murray: My name is Jerral Murray. I am an alumnus of United Tribes Technical College (UTTC), presently I am a student at North Dakota State University (NDSU) working toward attaining my bachelor's degree in Agricultural and Biosystems Engineering (ABEN). From my experience at NDSU, I have already completed the course IME 330 so I agreed to mentor this summer course to help if the other students may ask for it. A goal of mine is to find an internship based in ABEN to gain more experience within this major field

Ring and Pin Ceremony

On Friday, May 12, 2023, the College of Engineering held its biannual Ring and Pin Ceremony. This ceremony is a combination of two important events, the Order of the Engineer and the Pledge of the Computing Professional. Congratulation to all who attending and took the pledge. Pictured here are three IME students showing off their new rings.



Tristan Schettler, Jia Hui Chong, Samantha Reilly

IME Spring Advisory Board Meeting

Our spring advisory board meeting was held on April 28. Three new board members were welcomed; Jacob Schnabel is a 2006 manufacturing engineering alum and is a product engineering manager with Dura Supreme, Larry Olson is a 1989 IE alum and works as a pre-sales engineer with Cisco in the twin cities, Patrick Brandt is a 2005 IE alum and works as a quality engineer with John Deere in Fargo.

New officer elections were held. Ray Berry was nominated for upcoming Chair, with Clint Rossland as an alternate. David Long accepted the nomination for Vice-Chair. Jason Link, Sr. Director with Land O'Lakes in Ag retail with IT Solutions, was nominated by Dr. Grewell as a new board nomination. Jason is a 1995 IE alum.

Dr. Grewell informed the board of his resignation as Chair of IME. He has accepted a position as a Dean of the College of Engineering at Northern Illinois University in Dekalb, IL. His last day at NDSU is June 30. A search for an interim chair is underway.

Dean Kallmeyer and Provost Bertolini spoke of the future of the department. The continued decrease in enrollment has led to budget cuts. A new engineering building is being considered in the current legislative session. The state will appropriate \$59M if NDSU can raise 30% of the \$84M cost which is approximately \$25M. The new building would be a three-story square building which would replace the white round building. A bid will be going out to architects in the next few weeks. The search for a permanent Dean for the CoE will begin in the fall of '24. It was assured that Dr. Grewell's position will stay in the department and be filled. A permanent Chair will be discussed once the college knows what the future budget looks like. Dr. Kallmeyer assured the board that there are no plans to merge the IME dept in the near future. Future decisions will depend on the budget.

IME Ambassadors

We would like to welcome our upcoming IME Ambassadors for the 2023-24 school year. They enjoyed a lunch with Dr. Grewell as a welcome. The new and returning ambassadors include the following:

Jacob Schwarz
Kadon Strong
Dawson Galde
Laiken Sturn
Brooklyn Kelsch
Annika Tweten
Lauren Berg



AWARDS & RECOGNITIONS

Duin Family Fellowship

IME Assistant Professor, Diana Lopez-Soto, has been selected as the newest Duin Endowed Fellow for the College of Engineering. This is Dr. Lopez's first year at NDSU. Prior to coming to NDSU, Dr. Lopez worked as a visiting researcher at Purdue University's Regenstrief Center for Health Engineering and as a professor and researcher for the Monterrey Tech Industrial Engineering Department. Her research interests include healthcare systems engineering and analytics, process analysis and improvement, operations management and supply chain efficiency.



SCAN ME

Spencer Duin and his wife Carol, established the Spencer G. and Carol A. Duin Endowment Fund in 2018 to support the NDSU Department of Industrial and Manufacturing Engineering faculty. The money is used by faculty to provide students transformational learning experiences, enhance academic programs and advance research.

Congratulations Dr. Lopez!



Carol Duin, Diana Lopez-Soto, Spencer Duin



DISTINGUISHED
SERVICE AWARD

Spencer Duin is the recipient of the 2023 Distinguished Service Award, which recognizes an individual who has provided outstanding volunteer service for the benefit of the University or someone who has played a vital role as a volunteer fundraiser on behalf of the NDSU Foundation.

When Spencer neared retirement, he met the Dean of NDSU's College of Engineering and joined the College's advisory board shortly after. In 2002, two years after retiring from a 40-year career in industry, he became an NDSU Foundation Trustee. For more than 20 years, Spencer has shared his time, talents, and treasures for the betterment of NDSU.



During the *In Our Hands* campaign, Spencer and his wife, Carol, were one of the firsts to endow a professor. Spencer wanted his early campaign commitment to inspire others to invest in NDSU's faculty. By the end of the campaign, twenty-two new named positions were added.

Spencer's passion at the Foundation has been serving on the investment committee. He chaired the committee from 2013-2022, and as chair, he spearheaded a project that captured the history of the NDSU Foundation's endowment, which grew from about \$40 million in 2002 to more than \$423.2 million as of Dec. 31, 2022. For Spencer, philanthropy and volunteer work are rooted in principles he learned in the

western Minnesota farming community he grew up in and his world views. He believes in freedom, small government, and helping others. Spencer served in the U.S. Army and spent 18 months in Turkey prior to the Vietnam War. In addition to his work with NDSU, Spencer and Carol have served as foster parents and sponsored refugees. Spencer received an honorary doctorate from NDSU in 2018.



Spencer Duin
BS '66 Industrial Engineering
'18 Honorary Doctorate

AWARDS & RECOGNITIONS

NSF Travel Award

Congratulation to Raihan Quader for being the recipient of an NSF Travel Award! Raihan has received this award to attend the 2023 International Advanced Manufacturing Conference (NAMRC/ MSEC/LEM&P) to be held at Rutgers University in New Brunswick, New Jersey. The conference takes place June 12-16, 2023. This year the award was highly competitive, with more than double the number of applicants than award funds available. Congratulations Raihan!



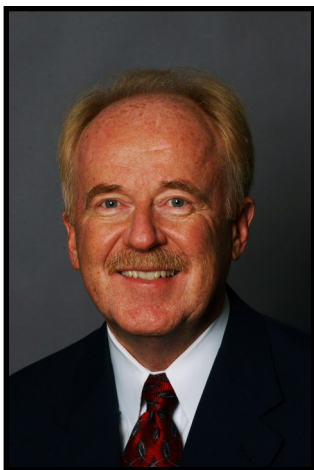
SRE Doug Ogden Best Paper Award

Congratulations to Abdulsalam Alqarni, a recent PhD graduate of IME! He was awarded the SRE Doug Ogden Best Paper Award at the RAMS (Reliability & Maintainability Symposium) conference that was held January 23-26 in Florida. The paper is titled "A physics-informed Latent Variables of Corrosion Growth in Oil and Gas Pipeline" co-authored by former IME grad student Phat Huynh, and former IME faculty members Dr.Om Yadav (advisor) and Dr. Trung Le .



IME Recognition of Excellence Award

Jim Aipperspach awarded IME Recognition of Excellence Award



Jim Aipperspach
BS '71 Industrial Engineering



Jim Aipperspach , a 1971 alumnus, was recognized for his distinguished career, professional achievements, and service contributions to the IME Department as well as his community. After graduating with a degree in Industrial Engineering, he worked as a naval officer in the U.S. Navy. Later, Mr. Aipperspach found great success working in the telecommunication industry. In his career, Mr. Aipperspach used the principles and skills he learned through the engineering education he received at NDSU. Jim has been a trustee for the NDSU Foundation since 1996.

We were fortunate to have Mr. Aipperspach speak at our Senior Capstone Banquet this spring. Mr. Aipperspach spoke about his career, advice for students, and the importance of family. He is the proud father of 2 boys and husband of his dear wife Rosie. They have resided in Iowa for many years, but still travel back to North Dakota many times throughout the year.

We wish to thank Jim and Rosie for their continued support of NDSU and the IME program.



Robert Heller, Jim Aipperspach,
& Dr. David Grewell

Alumni Spotlight.... Megan Chromy

What year did you graduate from NDSU and what is your current position?

I graduated from NDSU in May of 2021 from the Manufacturing Engineering program with a minor in Reliability Engineering. My current position is ISC Project Manager at Textron Specialized Vehicles (Arctic Cat) in Thief River Falls, MN. I started out as a manufacturing engineer and then got promoted to ISC Project Manager.

How did the IME curriculum/program prepare you for your career/1st job out of college?

The IME program prepared me well to become a manufacturing engineer and also a project manager. I specifically use the knowledge gained from my engineering statistics and project management classes I took. The project management class prepared me to get my CAPM certification through the Project Management Institute relatively effortlessly. All of the group projects we did throughout the program prepared me for my career since dealing with people is a huge part of any job you get after college. Knowing how to motivate different types of people and how to work through challenges when working in a group is vital to success in my current position.

What did you enjoy most about the IME program at NDSU?

I enjoyed the hands-on labs most during my time at NDSU. Getting to work with my fellow classmates on group projects was also a highlight. My capstone project was something I will never forget and is one of the reasons I am now mentoring two senior design groups at my company this year.

What advice do you have for current graduates entering the work force?

If I could offer advice to seniors preparing to graduate, I would say, don't be afraid to make mistakes or fail. Also, do not be discouraged if you find yourself unfulfilled or unsatisfied in your new career. I spent 5+ years dreaming of becoming a manufacturing engineer and working toward that goal, but when I got into my 'dream' job I had always wanted I quickly realized it was not what I wanted to do for the rest of my life. I felt disappointed and didn't know what to do from there, but my manager helped me evaluate the skills I excelled at and moved me to a different position that was a much better fit. I absolutely love my new position even though I never dreamed I would be in it.

What's something about your work that you really enjoy? What do you find most challenging?

I really enjoy investigating challenges our company has on the supply chain side of the business and formulating project plans to help meet our business goals. I manage projects for our Operations, Supply Chain, Logistics, Materials, and Manufacturing Engineering functions of the business. My favorite part is working cross functionally on all of my projects; however, that can be the most challenging part since you are managing a project and not the people from all the different departments.

What are upcoming challenges in your industry?

Some upcoming challenges in our industry are definitely staffing and recovering from the supply chain shortages experienced due to COVID-19.



NOTEWORTHY HAPPENINGS...

NSF Great Plains I-Corps Hub

The National Science Foundation's Great Plains I-Corps Hub, a partnership of eight universities across North Dakota, South Dakota, Nebraska, and Wyoming, is set to launch its second 5-week cohort on Monday, May 22nd.

The program aims to provide immersive, entrepreneurial training to researchers and engineers with the goal of moving innovative ideas to commercialization.

The Great Plains I-Corps Hub recently finished hosting their first training session in which 10 teams of students, faculty, and industry mentors tested their hypothesis using the customer discovery method to gain a better understanding of who their customer is.

Following a lean launch pad approach to customer discovery, the cohort connects researchers, engineers, and entrepreneurs of the Great Plains to the national tech ecosystem. This training enables participants to identify valuable business opportunities and explore ways to bring their research ideas to the marketplace.



Anyone with an entrepreneurial mindset and a concept can apply. However, to be able to pursue a National I-Corps training following a Regional Training you will need to build a 3-5 member team consisting of a:

Technical Lead

A faculty member who is the technology inventor and serves as principal investigator (PI), or a postdoctoral researcher who has expertise in the core technology area.

Entrepreneurial Lead

A graduate student or postdoctoral researcher who leads the team and is committed to commercialization.

Industry Mentor

An industry expert with business/entrepreneurial experience who is independent from the technology development and team.

Upcoming Cohort Dates:

Summer I – MAY 22 – JUNE 22

www.gp-icorps.org/summer-cohort

Summer II - JULY 18 – AUGUST 17

www.gp-icorps.org/summer2-cohort



For more information, visit www.gp-icorps.org, or contact Michael Russell michael.j.russell@ndsu.edu



CB² Spring Meeting

The 2023 IAB Spring Meeting was held on May 16 and 17 at the University of Georgia in Athens. This gathering brought together industry and academic experts for discussions and planning. During the meeting, faculty Principal Investigators (PIs) provided updates on their ongoing projects to IAB members, followed by Q&A sessions. In the afternoon, IAB members presented their Seed Concepts, creating discussions and potential collaborations. These Seed Concepts will form the basis for proposal submissions during the upcoming 2023 IAB Fall meeting.



Partnership and Collaboration: The meeting provided an opportunity for IAB members to revisit the Seed Concepts and engage in discussions. This session aimed to foster partnerships and collaborative efforts among IAB members, enhancing the potential impact of the Seed Concepts.

Transition in Leadership: We would like to announce that Dr. David Grewell, IME Chair and CB² Center Director, will be leaving the Center in June. Dr. Grewell has made significant contributions to the Center's growth and success. We express our gratitude for his guidance and wish him the best in his future endeavors. Dr. Dean Webster from NDSU's Coatings and Polymers will be taking over as the new Center Director.

Stay tuned for more updates and exciting developments as we continue to drive innovation and collaboration at the CB² Center.



IISE Conference and Fellow Award

This year's annual IISE (Institute of Industrial and Systems Engineers) Annual Conference & Expo was held May 20-23 in New Orleans. Dr. Harun Pirim and Dr. Lokesh Narayanan were both in attendance this year. Dr. Pirim presented four conference papers and chaired two sessions. One on network science and the second on infectious diseases. Dr. Narayanan also presented a conference paper while in attendance. A big "Shout Out" and congratulations to former IME faculty Dr. Om Prakash Yadav on being recognized with a Fellow Award at the IISE conference this year. The Fellow Award recognizes outstanding leaders of the profession who have made significant, nationally recognized contributions to industrial and systems engineering. A fellow is the highest classification of IISE membership. Dr. Yadav was is currently a Chair and Professor at North Carolina Agricultural and Technical State University in Greensboro, NC. Alumni Bob Heller and Spencer Duin were in attendance to celebrate the event!



Bob Heller, Om Prakash Yadav, & Spencer Duin

Congratulations to all of our spring graduates!



Undergraduate Students

BS Industrial Engineering & Management

Estabraq Abduljaleel
Samuel Blastervold
Noah Jackson
Matthew Kahl
Emma Liebsch
Luke Plowe
Samantha Reilly
Miranda Salmon
Tristan Schettler



BS Manufacturing

Jia Hui Chong
Jordan Kellen
Nicholas Olson
Nathan Sand
Dustin Schultz

Graduate Students

MS Industrial Engineering & Management

Labiba Asha
Tamanna Mim
Zaidur Rahman
Sydney Von Arb



Doctor of Philosophy

Tanzina Afrin
Industrial and Manufacturing Engineering “Data-driven Traffic Management Towards Resilient Transportation Systems”

Abdulsalam A. Alqarni
Industrial and Manufacturing Engineering “Advanced Reliability Modeling and Analysis of Pipeline Networks Considering Degradation Behavior”

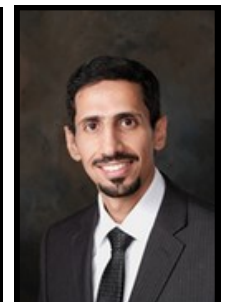
Arup Dey
Industrial and Manufacturing Engineering “Advanced Numerical Modeling in Manufacturing Processes”



Arup Dey



Tanzina Afrin



Abdulsalam Alqarni

2023 SENIOR CAPSTONE PROJECTS...



IME students finished their senior capstone projects with a full morning of in-person presentations which were live streamed on our Facebook page (www.facebook.com/NDSU.IME). A big thank you to our sponsors listed below and our judges, Eli Ahrens from UNFI, Chuck Geris from Massman Automation, Mike Olson from TEAM, and Clint Rossland from Sanford Health. The winners were announced at the awards banquet held on April 27 at the Alumni Center where alumnus Jim Aipperspach was the guest speaker.



1st Place—Giant Snacks



2nd Place—Textron

TEXTRON

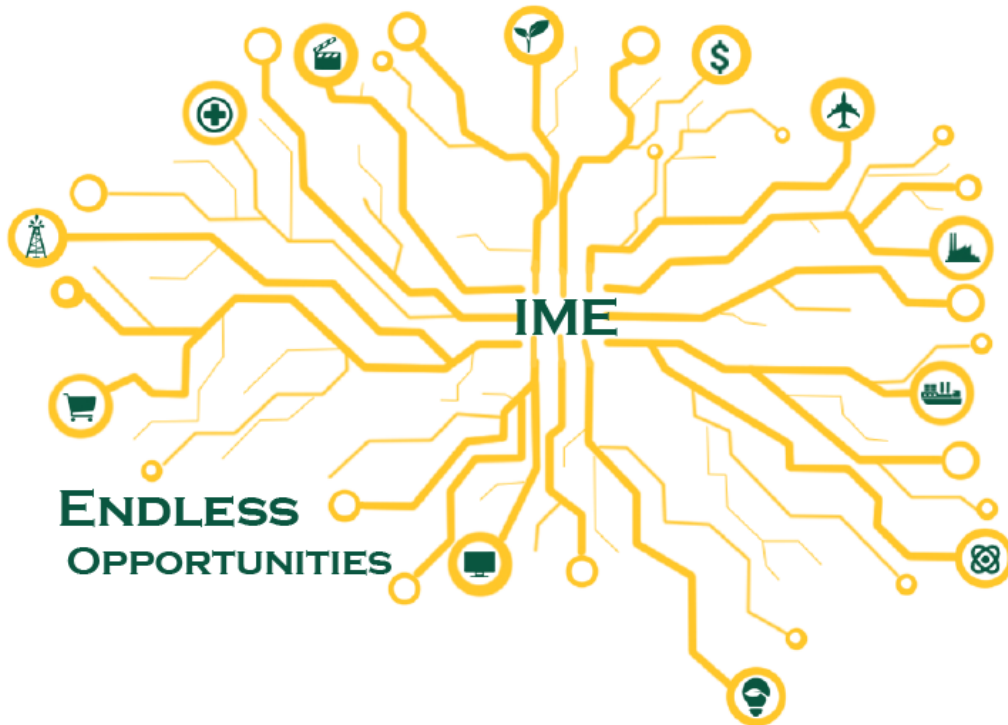


2023 SENIOR CAPSTONE PROJECTS...



Company	Project	Students
Giant Snacks	Packaging line assessment and cost analysis including new product bags to improve sales displays. Introduction of an oxygenator packet to increase freshness and research on a new packaging machine to improve production.	Estabraq Abduljaleel, Bryce Fox, Luke Plowe, Miranda Salmon
Action Fabricating	Manufacturing: Cost analysis and justification of outsourcing vs. in-house production of the line of manufactured rollers used in their final product.	Matthew Kahl, Jordan Kellen, Emma Liebsch
D&M Industries	Facility Expansion: Cost benefit analysis and justification for building expansion.	Samuel Blastervold, Benjamin Joy, Braden Wiedmann
Textron (Arctic Cat)	Manufacturing process improvement analysis of the bearing press operation. Includes new jig design, workstation design, and performance enhancements.	Orlando Ekici, Jacob Knox, Emma Marsolek, Nathan Sand, Dustin Schultz
Sandy's Donuts	As-Is/To-Be process analysis of the order entry to bakery to customer pickup/delivery. Goal is to improve order accuracy and on time performance.	Jia Chong, Gabby Ott, Tristen Schettler
Alexandria Industries	Manufacturing: Line balancing analysis for the main aluminum extruding process leading up to heating the raw materials in their ovens.	Danielle Collison, Nick Olson, Samantha Reilly, Hayden Wiese





Looking for more information about the IME department
or past newsletters?

Check us out on our website at: [NDSU.edu/ime](https://www.ndsu.edu/ime)
Or follow us on Instagram!



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