

IME NEWSLETTER



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Dates to Remember for 22/23 Academic Year:

- Fall classes start Aug. 22nd
- Job Fairs: Sept. 1, 13 and 21
- Sept. 26—Oct. 1 Homecoming Week
- Sept. 30 IME Advisory Board Meeting & Engineering Homecoming Showcase
- Dec. 16th Order of the Engineer Induction Ceremony & Reception
- Dec. 17th Commencement

Cover Story: Meet Dr. Joseph Stanislaw

COVER STORY: Meet Dr. Joseph Stanislao

If you've ever perused the walls of engineering administration (the white round building) you may recognize the name Dr. Joseph (Joe) Stanislao. Dr. Stanislao was the dean of the NDSU College of Engineering from 1975-1993. He earned his bachelor's degree in industrial engineering at Texas Tech, master's degree in industrial engineering at Penn State and Doctor of Engineering Science from Columbia University. But Stanislao's accomplishments do not stop there.



While at NDSU, Stanislao was instrumental in bringing the Robert Perkins Center for Computer Technology Transfer to campus in 1985, doubled the number of degrees offered by the college and saw enrollment increase from 657 students to more than 2,500. In 1991, he received the first Economic Development Award at NDSU for his substantial contribution to the economic development of North Dakota through teaching, research or service activities. After nearly twenty years at NDSU Stanislao moved to Bozeman, MT and worked as an adjunct professor for another 16 years and produced 8 patents. Then, in 2010 at the young age of 80 years old when most people would have retired, he started his own engineering consulting business!

This past year Stanislao reconnected with NDSU and the IME department, of which students and industrial and manufacturing engineering are his true passion. Over the years Stanislao has been a generous donor by gifting scholarships to IME students. It is no wonder that Stanislao was named as the inaugural recipient of the College of Engineering Impact Award at a special event on May 12th. The College of Engineering created the award to recognize individuals for their contribution to the college, commitment to excellence, dedication to the mission of the college and vision for the future.

Dr. Stanislao was also selected as the keynote speaker for the spring 2022 Ring and Pin Ceremony held May 13 to induct new graduates into the Order of the Engineer and Pledge of the Computing Professional. Stanislao shared his wisdom and seven words he feels are pertinent to assure success in professional life:

- 1) Work - develop good work habits and project a positive image
- 2) Time – use it wisely, it is precious. It cannot be substituted, duplicated, reproduced, or stopped.
- 3) Investment - start saving now for windows of opportunity later
- 4) People - the most challenging of the seven words. People can make or break you.
- 5) Creativity- create something new and original that no one has done before
- 6) Business—there is never a right or wrong time to start your own business or become an **entrepreneur**. It requires hard work, long hours and a strong attitude. But getting through engineering school demonstrates you already have these qualities.
- 7) Health—maintain a good lifestyle, eat right and get your sleep, and make sure to keep a healthy balance between your home and work life.

Joe is truly a living example of enthusiasm, hard work and positive attitude. Dr. Stanislao's diverse background is yet another example of how a degree in Industrial and manufacturing engineering provides a building block for success. The rest is up to you and seven words of wisdom.

DEPARTMENT NEWS...

A Year in Pictures...



Before students returned this past fall the department was buzzing with plenty of activity. After 65 years, the IME department moved to the newly renovated Engineering Building! The office and faculty are now located on the first floor of the ENGR building (directly east of the white round building) A new computer lab, which is a student favorite, and a new CoE student lounge is on the 2nd floor!

Fall Semester—To the start the new academic year off right, the IME department held an Open House to welcome students back and introduce them to their “new” space!





INDUSTRIAL & MANUFACTURING ENGINEERING

Social Media Campaign...

Jasmine Brockberg, fellow NDSU student, was hired to help implement a social media campaign to engage current IME students, recruit new students and spread the word about IME and our student organizations. She did a great job and everyone enjoyed the fun and activities. We even have our own Instagram account now! If you haven't joined, please scan and get in on the fun and stay in the know with IME updates.



Homecoming Scavenger Hunt!



Fun events!



Follow and IME Student



Free food and prizes



Easter Egg Hunts

DEPARTMENT NEWS ...

Students were excited to be back on campus with COVID restrictions reduced. Even more exciting was the collaboration between the IME dept and the business school! Approval was received for an accelerated IME/MBA program! Starting in the fall of 22, qualified students can now receive their IME degree and their MBA in a five year program. We like to call it the golden ticket!!

Fall is also a busy time for student recruitment. Check out our new recruitment video to learn what IME is all about—fee free to share!



Dr Grewell is always busy with fall recruitment events in Dickinson, Jamestown, and Minnesota.



IME's own Adam Hulm was crowned Homecoming King 😊

Spring Semester—Spring semester started off a little blustery with the most snow days on record. Three search committees were formed to hire three new faculty starting fall of 22. Two new assistant professors were hired in the areas of quality and operations management, Diana Lopez-Soto and Harun Pirim respectively. Reza Maleki was hired as an Associate Professor of Practice. We are excited for them to start the fall of 2022!

The IME department was also excited to host an IISE green belt certification on campus and thanks to a generous gift from the Emery family, students were reimbursed a portion of the fee for successfully passing their certification and for passing their FE exam if they chose to take it.

We wrapped up the semester with a large graduating class with many participating in the ring ceremony.



IISE Green Belt Certification



Participants of the ring ceremony.

AWARDS & RECOGNITION...



IME Professor Dr. Kambiz Farahmand , receives the Chamber of Commerce NDSU Distinguished Faculty Service Award

Dr. Kambiz Farahmand, Professor of the Industrial and Manufacturing engineering department, was selected by the NDSU Faculty Awards and Recognition Committee to be the recipient of the Chamber of Commerce NDSU Distinguished Faculty Service Award. As a part of the award, he received an honorarium of \$2,500. He was also recognized by President Bresciani and Provost Fitzgerald with a plaque at the annual NDSU Celebration of Faculty Excellence on May 10, 2022.



IME Assistant Professor, Dr. Trung Le, awarded Peltier Innovation in Teaching Award

Dr. Trung Le, Assistant Professor of the Industrial and Manufacturing engineering department was selected by the NDSU Faculty Awards and Recognition Committee to be the recipient of the Peltier Innovation in Teaching Award. As a part of the award, he received an honorarium of \$2,500. He was also recognized by President Bresciani and Provost Fitzgerald with a plaque at the annual NDSU Celebration of Faculty Excellence on May 10, 2022.

IME Grad student, Abdulsalam Alqarni, awarded Stan Oftshun Award

Abdulsalam Alqarni was awarded the Stan Oftshun Award for the best RAMS student paper for his paper entitled “Application of Iso-tonic Regression in Predicting Corrosion Depth of the Oil Refinery Pipelines “. His paper was selected among 6 excellent candidates.



IME Grad student, Alex Davila-Frias, awarded Thomas L. Fagan, Jr. Award and Golomski Award

Alex Davila-Frias was awarded the Thomas L. Fagan, Jr., RAMS Student Paper Award and 2021 Golomski Award.

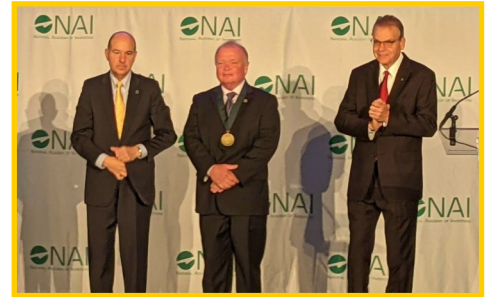
Alex received this award alongside Dr Saeed Salem and Dr Om Prakash Yadav for the paper entitled “Deep Neural Networks for All-Terminal Network Reliability Estimation” presented at the RAMS 2021 conference. The Thomas L. Fagan, Jr., RAMS Student Paper Award, is accompanied by a plaque and a \$500.00 honorarium.



AWARDS & RECOGNITION...

IME Professor and Chair, Dr. David Grewell, receives NAI Award

The induction Ceremony for Dr. David Grewell, Chair and Professor of Industrial and Manufacturing Engineering was held in Tampa, FL where Dr Grewell was named a fellow of the National Academy of Inventors. The NAI Fellows Program highlights academic inventors who have demonstrated innovation in creating or facilitating inventions that have made an impact on the quality of life, economic development and the welfare of society. The honor is considered the highest professional distinction accorded solely to academic inventors. Dr. Grewell's area of expertise lies in bio-renewable and biodegradable polymers, high-power ultrasonic, micro-fabrication and polymer and metal welding.



IME Assistant, Beth Dahl, Apple Polisher Award

Beth Dahl received the Apple Polisher award from Bison Ambassador, Cody Beaulieu. The Apple Polisher program honors NDSU faculty and staff who have made an exceptional impact on a student's college experience. Beth was also recognized at the senior capstone banquet for "always being there" and for her support over the years. Beth was also honored to receive a nomination for the annual Gunkelman award which goes to a student, staff or faculty member who best makes the campus a welcoming, friendly place.



Chuck Choate, Retires after 41 years of Service to NDSU

Charles "Chuck" Choate, retired on May 31 after forty-one years of dedicated service to NDSU and the IME Department. Chuck started in 1981 as a machinist building and repairing research equipment, then in the mid 90's became the welding instructor. Interesting enough Chuck has never taken a welding class, he learned everything he knows from hands on experience and the weld-ed program in Wahpeton. During his time here, Chuck has literally taught several thousand students to weld and has seen a lot of changes while working under six different NDSU Presidents and nine department chairs. Chuck states that campus itself has changed so much. Chuck remembers walking out the front door of the machine shop into a parking lot, which is now the CME auditorium, the student trailer houses where the Redhawk stadium now stands, and not to mention all of the new buildings! He began to laugh when he stated, they didn't even have computers when I started... a much different world back then!



When asked what he will miss most, Chuck replied teaching labs, my colleagues, but most of all getting a new batch of students each semester. His parting words of wisdom were, "Make sure you always have more than one tool in your tool box, build upon your skills and learn as much as you can in as many areas as you can. You just never know when you will need it."

It goes without saying that all who know Chuck wish him the very best in a well deserved retirement. We will miss his smiling face, great stories, and even his corny jokes!



SPOTLIGHTS...

#NDSU intern Spotlight: Ali Janjua

Ali Janjua, manufacturing engineering student, was featured in the #NDSU intern Spotlight. Ali chose an internship with Horn Plastics Inc. Fargo, ND. Ali mentions that he chose to work in this company to get his industrial experience from a smaller scaled operation that could be a good step towards a greater career.

When asked what his favorite part about the internship experience was, Ali stated, "The team I worked with. Coming with a background where it was even a task for me to differentiate between tools, I was really in need of a patient and positively led team. Every single person I worked with was hardworking, compassionate and self driven!"

Ali was also asked what advice he would give a student who is in the process of applying for an internship. He responded, "One thing that I did learn which I will never forget, is that no job is higher or lower than the other, it is your attitude that defines the worth of that experience!"



RESEARCH/GRANTS...

Process Development for Vehicle Level Design Loads Mapping Using MBSE

Dr. Yodo was awarded \$205,824 to develop a process for the development of an MBSE model of the vehicle design loads. This model should be able to capture design loads, the design requirements, and the relevant boundary conditions for each system, sub-system, assembly, and component.



ND EPSCoR Grant

Dr. Tim Q Le received a \$14,935 grant awarded to fund a graduate student for data analysis and collection.

Smart IoT System for Obstruction Sleep Apnea

Dr. Tim Q. Le received \$111,989 to research and develop a smart device for the monitoring and forecasting of OSA onset and progression before, during and after radiotherapy cancer treatment.



Biodegradable Mulch for Specialty Crop Production

An award of \$79,840 was received by Dr. Yodo to build on the results from previously funded project and conduct field trials and perform cost analysis to ensure customer acceptance. It will serve as a key foundation for the development and commercialization of a mulching system produced from corn.

Closed-loop Control 3D Printed Parts

Dr. Narayanan received \$36,690 to study the effect of ultrasonic vibration on mechanical properties of 3D printed parts made with bi-based plastic materials - PLA (polylactic acid) and PLA/PBS (polybutylene succinate).



NOTE WORTHY HAPPENINGS...

IME Advisory Board Meetings

Mike Brandt, 1989 alum, was welcomed onto the board at the fall meeting. Mike works for 3M in Brookings, SD. The spring meeting was held at Barry Hall, where the College of Business is housed, to celebrate the collaboration with the business school creating the new accelerated MBA program. The advisory board has begun the work of recruiting new members and updating the department's strategic plan.



Bob Heller, Ben Nordmark (student body ex officio), Beth Dahl, Michael Mathers, VerDale Herman, Ray Berry, Dennis Steinman, Hannah Holte, Clint Rossland, Dr. David Grewell, Dr. Lokesh Narayanan

IME Recognition of Excellence Award **Noel C. Jordan awarded IME Recognition of Excellence Award**

Noel Jordan received the IME Recognition of Excellence award for his distinguished career, professional achievements, and service to the community/state/society. Noel is a 1971 alumnus that received both his undergrad and master's degree in IEM at NDSU. He worked for Trane and later used his entrepreneurial aspirations to purchase a boat manufacturing company, Skipperliner. Over the years, Noel's company built boats all over North America and became the world leader in 50 to 150 passenger commercial boats with numerous awards and the claim to fame that Skipperliner built the largest boat in Disney's Magic Kingdom. He also owned the number one marina in Naples, FL where he still holds the position of Commodore of the Fleet.



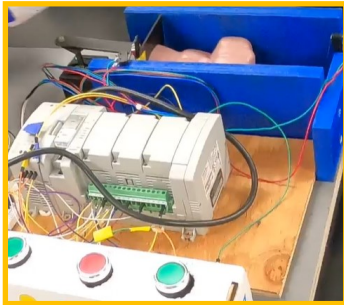
CB² Awarded Phase II

CB² was awarded Phase II of a NSF Industry-University Cooperative Research Center grant. This new funding along with contributions from industry partners, will total \$1,950,000 and will be shared among the four collaborating universities that comprise CB². Phase II is a five-year project that aims to leverage this opportunity by focusing on developing high-value biobased products from agricultural and forestry feedstocks for industry partners. The center develops fundamental knowledge related to bioplastics and biocomposites, and disseminates research-based findings that promote sustainability to industry partners. At the same time, the center helps undergraduate and graduate students learn the skills needed to become tomorrow's bioplastics scientists. More than 30 industry partners including Ford, Amazon, 3M, John Deere, Sherwin-Williams, Kimberly-Clark, AkzoNobel, ADM, Hyundai, and BASF define and mentor research projects at the four CB² sites. Dr. David Grewell is the founder/director of the Center. For more information about CB², visit us at: <https://www.cb2center.org/>



FALL AUTOMATION PROJECTS...

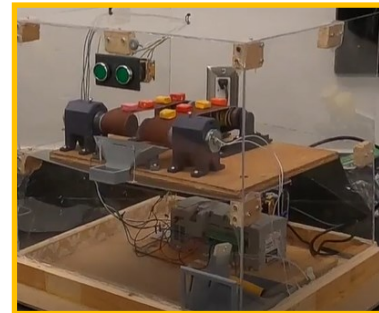
In IME 482 (Automated Manufacturing Systems) students learn how to use automation software, tools and equipment such as plc's (programmable logic control). The course is taught by Dr. Narayanan and involves a final group project which requires designing a simple automation system. The following designs are from this year's demonstrated projects. Scan the code to the right to watch our automated projects in action!



Automated Crusher



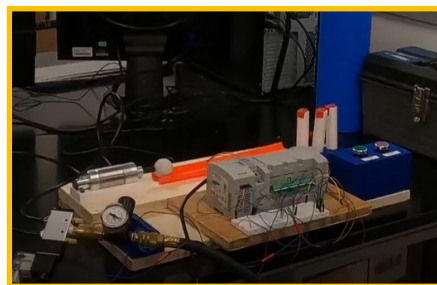
Automated Bean Filling Machine



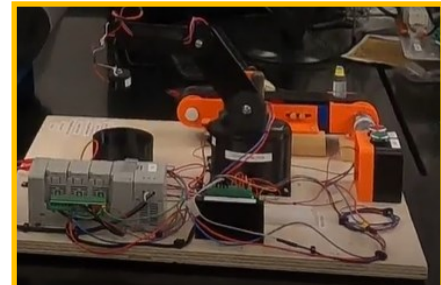
Vending Machine



Automated Curtain System



Automated Bowling Machine



Conveyor with Arm



Automated Drilling Operation



Soda Opener



Water Dispenser

Graduations...

Graduates:

Congratulations to all of our graduates!

Fall Undergrads:
IEM – 9 graduates
Mfg – 3 graduates

Spring Undergrads:
IEM – 30 graduates
Mfg – 8 graduates



Randy Kim, Abigail Anderson, David Hoffman, Martina Swartwood, Nathan McClenahen, Tara Koenig, Adam Hulm

Graduate Students:

MS Recipients:



Anunay Gupta



Md Abdullah Al Rahim



Samrat Singh

PhD Recipients:



Phattara Khumprom



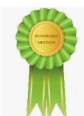
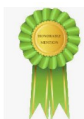
Alex Dávila



2022 SPRING CAPSTONE PROJECTS...



Company	Project	Students
ND Department of Transportation	DOT inspection device proof of concept and prototype design.	Cole Hilsген, Alex Ide, Erica Lee, Rachel Stiles
Action Fabrication	Manufacturing facility expansion design, layout, and efficiency justification analysis	Ally Behles, David Hoffman, Adam Hulm, Randy Kim, Nathan McClenahen, Ryan Mork
Border States Electric	Sales order entry/selection process review and improvement analysis.	Abigail Anderson, Jaden Anderson, Tara Koenig, Abby Lemnus, Ryan Scinto
BTD Manufacturing	Manufacturing material flow evaluation and continuous improvement analysis	Cody Beaulieu, Amy Bodvig, Gretchen Brau, Matthew Groshong
Felling Trailers	Manufacturing material rigging, transporting, unloading, and staging process analysis.	Noah Jackson, Hasnaine Karim, Drake Kaster, Justin Mork, Luke Oster
IE Business Partner	Ergonomic Hair Dryer Proof of Concept and Prototype Design.	Ashley McDaniels
John Deere	Manufacturing process downtime/uptime and improvement analysis.	Michael Bennett, Mitchell Dahl, Chris Hollerung, Scout Lindberg, Stephon Wilder
Precision Food Equipment	Food processing equipment reverse engineering, modification recommendation and parts/assembly drawing design for mass production.	Eli Ahrens, Dylan Johnson, John Kenow, Phan Le, Jamie Singelmann, McCoy Van Klompenburg
Sheyenne Manufacturing	Manufacturing process and improvement recommendation analysis	Andrew Hammerlund, James Kaczor, Erik Karl, Jack Radtke, Alec Theros
TSR Parts	Testing device design and build out to measure against the ASTM G65 Abrasion Resistance Standards.	Sherard Box, Ali Janjua, Levi Loose, Tyler Noffze
WCCO Belting	Manufacturing process mapping, process improvement and continuous improvement analysis	Sean Ho, Brian Ihringer, Koby Marchus, Nolan Nelson, Benjamin Nordmark, Martina Swartwood



2022 SPRING CAPSTONE PROJECTS...

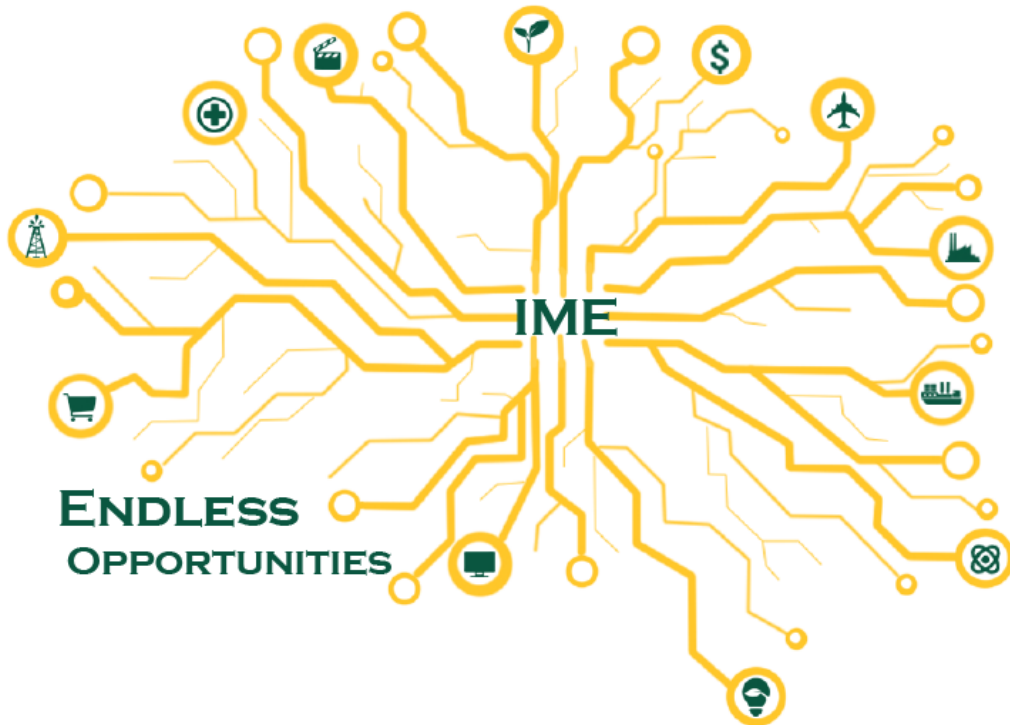
IME students finished their senior capstone projects with nearly a full day of in-person presentations that were streamed live on our Facebook page (www.facebook.com/NDSU.IME). A big thank you to our sponsors and our judges, Chuck Geris, Massman Automation, Michael Kiernan, Retired from CNH, David Long, Engineering Consultant, and Clint Rossland from Sanford Health. The winners were announced at the awards banquet where alumnus, Kim Heinle-Nelson, senior quality engineer manager at Digi-Key was the guest speaker. Congratulations goes to Felling Trailers for winning the first place title, TSR Parts for taking second, Sheyenne Manufacturing for placing 3rd, Action Fabrication for “Best Financial Analysis”, and to Precision Food Equipment for “Above and Beyond Award”!



Above and Beyond

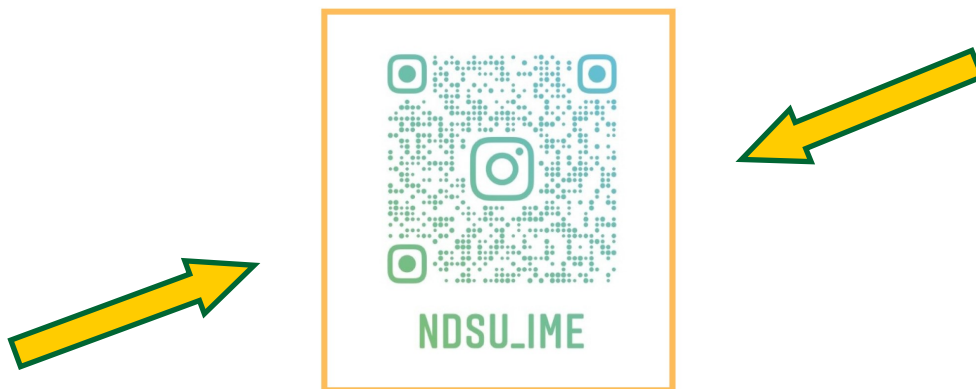


Best Financial Analysis



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

Check us out on our website at: NDSU.edu/ime
Or follow us on Instagram!



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