2021 Commencement
Greetings alumni, students, faculty and friends:

Here in Mechanical & Industrial Engineering we are so excited to welcome our staff, faculty and especially our students back to campus! We can’t wait for the upcoming fall semester in our department, as I know faculty and students alike feel renewed appreciation for face-to-face classroom learning. This May we celebrated our graduating students both virtually and in person. We applauded their many successes, which included an NSF Graduate fellowship, a 2020-2021 Rising Researcher Award, a Jack Welch Scholar, and a Scanlon student employee of the year.

I am also incredibly proud of the resilience of our faculty, who in a year of stymied research and online teaching achieved so much, including Professor Yanfei Xu who was chosen as the 2021-2022 TIDE Ambassador Fellowship, Professor Shannon Roberts who received the 2021-2022 Lilly Teaching Fellowship, and Professors Govind Srimathveeravalli and Yubing Sun who were awarded a $1.4 million NIH R01 grant this month. In June we bid a fond farewell to Professor Ian Grosse, who retires this summer after 34 distinguished years teaching in the department. We will miss you, Professor Grosse!

Please read further to find out more about our department’s milestones and accomplishments at the forefront of education and research. You can also find us at our website www.umass.edu/mie.

Wishing you good health and happiness,

Sundar Krishnamurty

Sincerely,

Sundar Krishnamurty
Professor and Department Head
Mechanical & Industrial Engineering

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This newsletter is published in the Fall and Spring Semesters by the Mechanical and Industrial Engineering Department at the University of Massachusetts Amherst.

Email your news, contributions, and suggestions to Jennifer Blake: jblake@umass.edu
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MIE Professor Krish Sharman

Professor and Endowed Chair in Renewable Energy Dr. Krish Thiagarajan Sharman is excited. His new Ocean Resources and Renewable Energy (ORRE) lab has a unique piece of equipment that simulates ocean conditions, both waves and currents, in order to study methods to better harness ocean energy as a renewable resource. And there’s very few facilities like it on the east coast (or indeed, the country!)

“I am so proud of our wave lab,” says Sharman. “Because we started with a blank sheet of paper and designed it from scratch. We started with a ceiling and a floor and built it bottom up. I’m so proud of our cohort of students who were instrumental in making this happen. I had support at all levels – undergraduates, graduate students, postdocs (Dr. Jessica Nguyen) and technical staff (Dana Parsons) who were a backbone to the project.”

Professor Sharman researches marine renewable energy – wind, wave, tidal, and thermal energy conversion. “I look at marine renewables as a whole,” says Sharman. “I’m interested in renewable energy from the oceans, both from the water and air. So that is wind, wave, tidal. Our group also work with coastal food production systems like aquaculture. So I have a relationship as well with marine scientists and ecologists.”

Sharman and his team designed the Wave Lab, and it was built in Massachusetts by Alden Labs and their contractors. The lab can recreate ocean waves and ocean currents simultaneously. “It’s easier to do one or the other,” notes Sharman. “But our lab is so modular we can do either/or.” In a tidal estuary during high tide, water comes in and waves are created by wind – so in this case waves and currents flow in the same direction. However, during low tide, waves and currents are opposed. “In our lab, we can recreate both situations in the small floor space,” explains Sharman. “That is unique.”

Sharman sees his role at the university as one that serves society. “Our role is a service role in terms of serving society, even though we do research and teaching. The underlying goal is safety. Safety means you want to build a robust infrastructure that will survive the forces of the ocean, while simultaneously extracting energy from it.” At UMass Amherst, Sharman most enjoys working with students: “students here love working on intellectual problems. They are all shining stars! Our students like Ahmed Alshuwaykh, Jacob Davis, Devon Lukas, Megan Anderson, Paul Hirsh – they make the whole thing worth it.”

Sharman received his PhD in Naval Architecture and Marine Engineering from the University of Michigan in 1993. He arrived at UMass Amherst from the University of Maine in 2018.
MIE Professor Chaitra Gopalappa is a pioneer in her field of disease modeling, with international research and policy influence. Gopalappa develops mathematical and computational models of diseases, for prevention and control analyses. Her goal is to develop the math necessary to capture the dynamics between the variety of factors that influence diseases: epidemiological, behavioral, social, demographical, and environmental. She has received a $1.5 million NIH-R01 Grant Award, a $1.2 million NSF INT (Integrative) grant from IIS (Information and Intelligent Systems), and a National Academy of Sciences Kavli Frontiers of Science Fellowship.

Her work has impacted global public health policy, including being cited by the White House National HIV/AIDS Strategy in support of their latest HIV treatment guidelines, as well as the WHO Global Action Plan and CDC Vital Signs Report. In recognition of her unique contributions, Professor Gopalappa was invited by WHO to serve on their Technical Expert Group for global elimination of cervical cancer.

When the pandemic hit, Gopalappa's lab developed a model for university populations, called a COVID-19 university simulator, that evaluated combinations of testing, size of social contacts, population size on campus, and vaccine coverage upon partial or full vaccine availability, for effective control of an outbreak. Because she worked in disease modeling, Gopalappa was less surprised than many of a disease outbreak of pandemic potential. “My first several research proposals, though unsuccessful, were on early response and control of emerging disease outbreaks,” explains Gopalappa. “I assign books such as Coming Plague: Newly Emerging Diseases in a World Out of Balance by Laurie Garrett and Infections and Inequalities: The Modern Plagues by Paul Farmer as reading assignments in my disease modeling class (MIE 290H), for students to get a bigger picture of the complexities they are trying to model.” Even then Gopalappa was initially somewhat hopeful that the spread of COVID-19 would be controlled, until the first set of data became available. Then, knowing as she did how tiny a window exists for effective control, the ramifications that this would be a global pandemic became clear.

Gopalappa has always been fascinated by the intersection of civilizations and disease: “On shorter time-scales diseases seem to be more of a metric measuring societal progress between nations, and on longer time-scales, for centuries, disease outbreaks have been pivotal time-points at which major reorganizations of societies have happened. So disease prevention is this complex engineering problem, an exciting mathematical challenge or a complex puzzle piecing together these different aspects of society.”

Gopalappa received her PhD in Industrial Engineering from the University of South Florida in 2010. She arrived at UMass Amherst after a two year postdoctoral fellowship at the Centers for Disease Control and Prevention (CDC) in 2014.
Shannon Roberts Chosen as UMass ADVANCE Faculty Fellow and Lilly Teaching Excellence

Assistant Professor Shannon Roberts has received a UMass ADVANCE Faculty Fellow position for the 2021-2022 academic year. Advance Fellows partner with the UMass ADVANCE leadership team to promote gender equity for faculty at UMass. The UMass ADVANCE program is funded by the National Science Foundation (NSF) in order to generate gender and racial equality for faculty in science and engineering. Roberts was also honored to be one of eight campus faculty members chosen by the UMass Center for Teaching and Learning (CTL) as recipients of the 2021-22 Lilly Fellowship for Teaching Excellence. Through her Lilly Fellowship, Roberts proposes to redesign MIE 273/CEE 260, Probability and Statistics for Engineers, to include a semester-long project that allows students to apply theoretical mathematical principles to actual engineering design problems.

Yanfei Xu Chosen as 2021-22 TIDE Ambassador

The Center for Teaching and Learning has announced that Assistant Professor Yanfei Xu has been selected as one of the 10 members of the 2021-2022 TIDE Ambassadors (Teaching for Inclusiveness, Diversity, & Equity) Faculty Fellowship cohort. As part of her participation in the TIDE Program, she will receive $1,500 to use for her further professional development and will participate in numerous TIDE activities designed to help her enhance an inclusive experience in her classes and beyond.

Erin Baker Appears in a Trio of High-profile Venues Revealing the Value of Wind Power

MIE Professor Erin Baker is currently participating in a threesome of high-profile activities that educate the public about the vast potential of wind energy. In April, Baker moderated an offshore wind panel for the Wilson Center and the Smithsonian. She was also featured in a CNBC video called The Rise of Wind Power. Finally, Baker was part of a team that convened a large group of experts who predicted accelerating cost reductions in offshore wind in a study published in the journal Nature Energy.

Xian Du and Meghan Huber Selected for NSF Game Changer Academies

Professors Xian Du and Meghan Huber have been selected to be Panel Fellows in the 2021 cohort of the National Science Foundation (NSF) Division of Civil, Mechanical, and Manufacturing Innovation’s (CMMI) Game Changer Academies for Advancing Research Innovation (CGCA). Du heads MIE’s Intelligent Sensing Lab, which focuses on the scale up of flexible electronics printing processes from lab to industry. Huber heads the Human Robot Systems (HRS) Laboratory, which lies at the intersection of robotics and human neuromotor control and addresses the challenges that robotic systems and humans face when learning to physically interact with one another.
NIH Funds Govind Srimathveeravalli to Develop Pioneering Bladder Reconstruction Technique

MIE Professor Govind Srimathveeravalli has received a $1,366,330 grant over four years from the National Institutes of Health and the National Institute of Diabetes and Digestive and Kidney Diseases to pursue a revolutionary technique for tissue-engineering grafts for bladder reconstruction. Such reconstructive surgery is essential to restore urinary function in patients with neurogenic bladder dysfunction, congenital disorders, or following the surgical treatment of bladder or pelvic cancers.

The co-investigator for this project is MIE Professor Yubing Sun, who studies fundamental engineering principles, such as manufacturing, biomechanics, materials science, and micro/nanoengineering, to understand and harness the mechanobiology of cells for applications such as disease modeling and cell-based therapy.

Jinglei Ping Develops Ultra-Sensitive Flow Microsensors

A team of researchers led by MIE’s Jinglei Ping have developed the thinnest and most sensitive flow sensor, which could have significant implications for medical research and applications, according to new research published recently in Nature Communications. The findings pave the way for future research on all-electronic in vivo flow monitoring investigating ultra-low-flow life phenomena that is yet to be studied in metabolism processes, retinal hemorheology and neuroscience.

Sundar Krishnamurty Receives Grant from VentureWell

Professor and Department Head Sundar Krishnamurty -- the Isenberg Distinguished Professor in Engineering, and the director of the Center for e-Design -- recently received a VentureWell Faculty Grant of $30,000. This funding will support the creation of a new course that teaches innovation and entrepreneurship from the viewpoint of understanding disability.

Jim Lagrant recipient of UMass Faculty Research Grant/Healey Endowment Grant

This past spring, MIE Professor Jim Lagrant was the recipient of a UMass Faculty Research Grant/Healey Endowment Grant for his proposal for “student-designed, adaptable smart manufacturing model process for undergraduate and graduate education.” The goal of the project is to acquire hardware and software necessary for senior capstone teams to design and construct manufacturing equipment that will be used in MIE’s engineering laboratories.
Ganesh Pai Mangalore Wins Prestigious Link Foundation Fellowship

Ganesh Pai Mangalore, a Ph.D. student in the Mechanical and Industrial Engineering Department, has been awarded a $32,500 Link Foundation Fellowship in Modeling, Simulation, and Training. Pai Mangalore, who is a member of the research group headed by Assistant Professor Anuj K. Pradhan, will be studying how to conceptualize, develop, and evaluate a training program to help drivers realize the finer points of advanced driver assistance systems (ADAS), whose safety benefits are largely negated when utilized by uninformed users.

In announcing the fellowship, Pradhan called it “a prestigious fellowship in our field and a singular honor.”

Bridget Benner Joins Panel on Promoting Women in Science

Bridget Benner, a doctoral student in the MIE Department and an alumna of Bunker Hill Community College (BHCC), joined other panelists from the National Institute of Health and Massachusetts General Hospital for a panel discussion on career pathways in STEM on November 19. The event was part of BHCC’s second annual Louis Stokes Alliances for Minority Participation (LSAMP) Day, and the topic of the discussion was “Promoting Women in Science.”

MIE Graduate Students Land Prestigious Jobs and Postdoctoral Fellowships

A few congratulations are in order to recent MIE graduate students. Dr. Ericber Jimenez Francisco, advised by Professor Frank Sup, is now a post-doctoral fellow in the Kinesiology department. Dr. Mark Price, also advised by Sup, is a post-doctoral fellow in Professor Huber’s lab. Dr. Yalda Ebadi, advised by Professor Roberts, has joined Land Rover in Portland, Oregon. Dr. Anita Anup Dey, advised by Professor Rothstein, is at Intel; and Dr. Nariman Banaei, advised by Professor Kim, is a Scientist at Sorrento Therapeutics studying covid and cancer. Dr. Todd Currier, advised by Professor Modarres-Sadeghi, is a Senior Professional Staff at The Johns Hopkins University Applied Physics Lab; and Dr. Evan Gaertner, advised by Professors Manwell and Lackner, is a system engineer at Siemens Gamesa. Of course, our MS students are going places as well – as a wind turbine blade engineer, supply chain analyst at Wayfair, and engineering manager at iRobot, to name a few!
GRADUATE STUDENT SPOTLIGHT

Graduate Student Spotlight: Hannah Johlas

Currently: Postdoctoral Fellow at MIT
Previous degrees: PhD in Mechanical Engineering, UMass Amherst, BA in Physics with Environmental Studies minor (2016), Macalester College, St. Paul, MN
Hometown: Champaign-Urbana, Illinois

What is your research about? How does your research field help advance renewable energy?
I perform computational fluid dynamics simulations on supercomputers, to study fluid flows related to offshore wind turbines. Specifically, I simulate the power generation and wake dynamics of floating wind turbines, the wake characteristics of tilted-rotor turbines, and how breaking waves affect fixed-bottom offshore wind turbine foundations. Wind energy is a key component for a renewable energy future, and offshore wind turbines are a promising option to expand our global wind-driven power generation. The goal of my research is to better understand offshore wind turbine power generation, loads, and wakes (which affect power and loads), to help improve models used when designing turbine components and planning wind farms.

How did you get interested in wind energy?
I chose wind energy engineering as my career because it was the perfect intersection of fighting climate change, solving problems to build tangible things, and studying a field with lots of unanswered questions. In college, I decided I wanted to "make the world a better place" -- I was a Girl Scout through high school -- by helping fight climate change.

What have been your favorite parts of your PhD so far?
The best part is obviously getting to do research that I find meaningful and interesting, partially facilitated by my NSF Graduate Research Fellowship. This fellowship also enabled a major highlight of my PhD research: collaborating with engineers from the National Renewable Energy Laboratory (NREL), in Boulder, CO. Closer to home, my PhD wouldn’t be possible without my local community of my labmates, the other Wind Energy Fellows, and my support network from the Graduate Women in STEM (GWIS) organization.

Why did you choose UMass Amherst for graduate school?
One major factor was a very positive experience during my UMass Amherst summer REU, when I worked with Sanjay Arwade to simulate how soil characteristics affect offshore wind turbine dynamics. During this REU, I was introduced to the strong community of wind energy researchers at UMass Amherst. In the end, the deciding factor was feeling like I would fit well with my advisors (Matt Lackner and David Schmidt). As I finish my PhD, this feeling has been confirmed -- I deeply appreciate how they actively support my career development, value good communication skills, and encourage a healthy work-life balance.
Graduate Student Spotlight: 
Franklyn Kanyako

Current degree: PhD in Industrial Engineering
Previous degrees: Shanghai Jiao Tong University, Shanghai, China. Aerospace and Aeronautics Engineering
Hometown: Bo, Sierra Leone
Hobbies: Soccer, hiking

What is your research goal or dream job?
Sustainable energy is a passion of mine, I write about energy policies in West Africa in my blog: http://www.greenafricanow.com/. I also enjoy mentoring students; some I have worked with over the years have gone on to grad school and others into industry. My ambition is to find a career working on sustainability, specifically water-energy and land nexus whether in academia or in a research agency.

What is the most exciting or meaningful aspect of your work here at UMass?
Being at UMass Amherst has been a once-in-a-lifetime experience. Working with Professor Erin Baker provided me with an incredible opportunity to collaborate and work in incredibly different parts of the world. My work at UMass has resulted in many interesting collaborations, but I am most proud of the work I did with a group of mentors to provide an uninterrupted power supply to my hometown’s hospital neonatal intensive care unit using solar energy. The installation of this unit has helped to reduce infant mortality from 25% to less than 10% (https://www.projectbo.org/). During my time at UMass, I also enjoyed mentoring students. I’ve mentored several students and still keep in touch with them; it’s incredible to see them excel in their work and further research.

How did you get interested in engineering?
My hometown of Bo has a defunct airport with an old plane parked on the tarmac. I’ve always wondered how planes fly. Can I repair it? These questions, combined with my early interest in Math, Physics, and Chemistry, pushed me to pursue a career in engineering, specifically Aerospace Engineering. With more experience, I realized that the most pressing issue my country is currently facing is a lack of access to electricity. I chose to pursue a PhD in industrial engineering with a focus on how to fund and expand energy access, particularly in low-income communities.

Describe your research:
My research focuses on environmental decision-making under uncertainty in climate policies. Specifically, in my dissertation, I work to answer the question of how to allocate R&D investments across portfolios of low carbon energy technologies. The goal is to provide an understanding of which portfolios of R&D investment in energy technologies are intelligent responses in the face of technological, model and climate uncertainty.
MIE Junior Sarah Widrow Wins Two Noteworthy Transportation Awards

Junior Sarah Widrow was the recent recipient of two significant awards: a Women’s Transportation Seminar / Rhode Island Undergraduate Scholarship of $1,000; and a Safety Research Using Simulation University Transportation Center (SAFER-SIM) Excellence Award for Undergraduates. Widrow maintains a high GPA of 3.71 and has been awarded previous scholarships, including the Paul C. Washburn scholarship and the Richard Giglio Scholarship. Widrow has spent her time as an industrial engineering major focusing on automobile transportation safety. She served as an undergraduate research assistant since the fall of 2019 on Professor Pradhan’s team, which does extensive automobile safety research in the MIE Human Performance Laboratory.

MIE Undergrad Jaydeep Radadiya selected as “Rising Researcher”

MIE student Jaydeep Radadiya was one of two College of Engineering undergraduate students chosen to be “Rising Researchers,” as designated by the UMass website Research Next. The award recognizes exceptional accomplishments of UMass Amherst undergraduate students who excel in research, scholarship, and creative activity.

According to Professor Anuj Pradhan, Radadiya’s faculty research advisor, “He has played a pivotal role in my research on the safety of automated vehicles, and he has undertaken significant efforts and displayed great leadership in examining vehicle automation systems to characterize functionality, capabilities, and limitations.”

PTC Newsletter Highlights Work of Graduate Jose Lemus

MIE graduate Jose Lemus was highlighted as a “Key Collaborator” in the May issue of the PTC Digital Transformation Technologies Newsletter. As the newsletter said about Lemus, “This semester, he worked in an independent study to understand product integration and industrial automation using Vuforia Studio [Augmented Reality] by simulating the Pilot Process Machine. The machine automatically dispenses the desired color and quantity of Skittles for users.” Lemus is joining PTC as an Associate in the Technical Rotational Leadership Development Program.

rStream Recycling Team Makes Finals of 2021 Innovation Challenge

rStream Recycling, a startup company co-founded by MIE undergrads Ian Goodine and Ethan Walko, was one of five projects selected to compete in the $60,000 Innovation Challenge Final on April 7. rStream is a pioneering approach to recycling the vast amount of plastic dumped into landfills each year. Instead, it repurposes this discarded waste into clean material that can be reused to manufacture innumerable items and technologies in an eco-friendly way. rStream is also a member of the 2021 Cleantech Open Summer accelerator, the largest Clean Technology accelerator in the world.
Graduating Senior Selena Cho Receives Competitive NSF Graduate Research Fellowship

MIE graduate Selena Cho was among a select few to receive a coveted NSF Graduate Research Fellowship. The Fellowship is a competitive award program that awards 1,600 fellowships a year. The award includes a $34,000 stipend and $12,000 cost-of-education allowance. Cho is researching the use of body-sensor fusion for predicting fall risk in older adults. As she says, “Falls in older adults are becoming a major public health issue as the proportion of elderly people in our population continues to grow. One in four older adults fall each year creating over $50 billion in annual fall-related healthcare costs in the U.S.”

Graduating Senior Allison Lepine Wins Jack Welch Scholar Award

Allison Lepine of Chicopee, MA., was honored this May for her leadership and executive ability. Lepine majored in industrial engineering and minored in engineering management. Lepine put her skills in engineering and management to use this spring when she and a group of students observed the operation of a Massachusetts mass vaccination site, performing on-site studies and making recommendations for improving the site’s efficiency. After graduation, Lepine joined PepsiCo as a supply chain leader at the company’s Frito-Lay plant in Killingly, Conn.

Paul Hirsh Selected as a Scanlon Student Employee of the Year

MIE student Paul Hirsh has won a Scanlon Student Employee of the Year Award. Hirsh will be returning to the MIE department in the fall of 2021 as a graduate student. As a Scanlon recipient this year, Hirsh will receive a monetary award of $500 and a certificate documenting his meritorious service to the university.

According to Hirsh’s nomination letter written by MIE Professor Krish Sharman, “During the past one and half years of his employment in our laboratory, we have come to regard Paul as an indispensable member of our team. Amongst a research team of post-docs, graduates, and interns, Paul shines for his unwavering work ethic and devotion to the success of the group.”

Marlise van Tonder Going to Tokyo Olympics on South African Field Hockey Team

MIE graduate Marlise van Tonder has qualified to go to the Tokyo Olympics as a reserve on the South African field hockey team, as announced by the South African Sports Confederation and Olympic Committee. As she wrote to MIE Department Head Sundar Krishnamurty, “I appreciate the support UMass has given me during the buildup towards the Games.” She traveled to Tokyo with the team and will be staying with Team South Africa in the Olympic Village.
What are you looking forward to during your Olympic experience?
Our Olympic prep has been incredible during this Olympic cycle. We were blessed to have centralized camps with the entire squad for most of the year. We haven't been able to play external matches due to Covid, so I'm looking forward to seeing our progress and competing against top teams. I'm very excited for our opening game against Ireland. I'm also looking forward to experiencing the Japanese culture and take in all I can from the event.

Tell us about your journey to become an elite athlete.
I started playing hockey when I was 12 and instantly fell in love with the sport. After the 2012 Olympics, Dirkie Chamberlain (she went to the same high school as I did) came to the school to talk to us at assembly. That was the day I knew I wanted to play for South Africa and had set my sights on the 2020 Olympics. I started attending extra clinics and having individual training sessions with coaches and playing club hockey as well as school hockey to get as much game-time as possible. In 2016 I made my debut for South Africa at the Summer Series in Cape Town, which was an indescribable experience. Since then the hard work has continued and the fun has grown exponentially.

How did you juggle your difficult engineering studies with Olympic training and tryouts?
Without God, I wouldn't have managed the juggling act. It has been an amazing adventure so far, but none of it would've been possible without His grace, guidance, and peace. I know that I can get through whatever challenge is in front of me because He is with me. With that, I've had to learn to focus on the task at hand – when I'm at training I'm focused on training and the skillset I'm working on for that day; when I'm studying or in class I'm focused on that. The coaching staff at UMass and the MIE professors have made the whole process a lot easier with their support.

Are you headed for a career in engineering, and if so, what is your dream job?
I'm not exactly sure what the future holds. For this upcoming year I'm doing my Masters at UMass (also mechanical engineering) and after that I would love to play in the Belgian or Dutch hockey leagues. Besides playing I want to go into research and development, either in wind energy or robotics. There's been a lot of growth in wind energy research in South Africa which is quite exciting.
Hometown: Stoughton, MA  
Year of Graduation: 2022  
Awards: Women’s Transportation Seminar/Rhode Island Undergraduate Scholarship, Safety Research Using Simulation University Transportation Center (SAFER-SIM) Excellence Award for Undergraduates

What advice do you have for incoming Industrial Engineering students?  
Go to office hours! All the professors I’ve had experience with want their students to succeed, and are even more approachable when you meet with them one-on-one. They help you understand that education is about learning rather than acing every test. I’ve seen the pressure infused in the engineering environment and getting to know your professor or asking them for advice on how to study can alleviate unhealthy stress and help you become part of the community.

What are your future plans?  
I have been passionate about human factors engineering for a while, but I hope to learn more about the field of Industrial Engineering and its different career pathways by potentially earning a Masters degree. I hope to incorporate human-centered design and a socially conscious mindset into my future career so I can make positive impacts to my community.

What are your favorite experiences here at UMass so far?  
The experiences that supplement my coursework are by far my favorite. I have made numerous friends from many different states and countries outside of Massachusetts that have shared with me their unique perspectives. My best memories from the past remote semesters are cooking delicious meals with my sister and friends while it was hard to socialize, but I am looking forward to running into classmates in person this semester!

Why did you choose UMass?  
I am fortunate to come from a family with many UMass alumni, so I have been exposed to school pride and love since childhood. Ultimately, I chose UMass because of the countless resources it offers. I knew that at UMass I could shape my college experience the way I wanted it, whereas at a smaller school I would be more limited. I have not met another student with the same path, and that is due to the school’s extensive extracurricular and course offerings. I also was confident the College of Engineering offered a top-level education for a great value.

Why did you decide to major in engineering?  
My grandfather and aunt had always encouraged me to consider engineering, but I didn’t seriously consider it until senior year. In high school I loved my humanities courses and was good at STEM, and when my uncle showed me Industrial Engineering I thought it was the perfect combination of my strength in STEM and working with people. Specifically, human factors engineering stood out to me, which combines psychology and design, and I am still very interested in it now.

What else are you involved in either on campus or off?  
I am an Undergraduate Research Assistant in the Human Performance Laboratory with Dr. Anuj Pradhan's group. We focus on the human factors of advanced vehicle technologies, and study how interaction with the technology could be made safer. I also work in the Engineering Career Center helping students develop their resume and other career skills. I am a member of the Society of Women Engineers and am the new President of the Institute of Industrial and Systems Engineers (IISE) chapter of UMass. I serve on the Dean’s student advisory committee and am involved with other groups that collaborate to make the school’s environment better. I also play on the UMass Women’s Club Soccer and Lacrosse teams.
Women of MIE

The women of MIE gathered in July to say goodbye to Professor Jenna Marquard and assistant to Department Head, Heather Caldwell Urquhart.

From left to right, back to front:
Jenna Marquard, Shannon Roberts, Bonnie Kokosa, Yanfei Xu, Meghan Huber, Erin Baker, Sharon Como, Chris Langford, Chaitra Gopalappa, Jennifer Blake, Heather Caldwell Urquhart, Ana Muriel
The MIE department gathered in June to celebrate Professor Ian Grosse's retirement from the department. Grosse arrived at UMass 34 years ago with a PhD in Mechanical Engineering from Virginia Tech. His initial area of expertise was engineering design and analysis. His research focus later moved into biomechanics, additive manufacturing, and cold spray technology.

The most satisfying part of the job, says Grosse, is working with nice and smart people, both students, faculty and staff: “The quality of our undergraduate students has increased dramatically over my 34 years. I'm very impressed with the students in our department.”

In his toast to Grosse, Department Head Professor Krishnamurty said: "I will always remember your passion and commitment to our students; to our faculty and staff; and above all, to our department, campus and our community. I do not believe you have ever said NO when I or others have approached you with a request – be it to serve on a committee or teach an extra class or volunteer for an event or help us with the freshmen advising or serve as the Associate Department Head for a new department. You are an amazing leader, an accomplished scholar, a dedicated mentor; and a reliable and fun-to-be-around team-player."

In September Grosse is heading off with his wife Bonnie on a 1100 mile epic bike ride from the southernmost point of England to the northern most point of Scotland. Happy trails Professor Grosse, you will be greatly missed!
Giving

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