

ENGINEERING AND DESIGN DEPARTMENT NEWSLETTER





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A Word from the New ENGD Chair



Hello Alumni and Friends of the Engineering and Design Department at WWU,

It is good to be able to greet you in my first department newsletter as chair. Our department is currently characterized Change by and Achievement - and, fortunately, most of the change will lead us to even greater achievement. We recently said goodbye to Jeff Newcomer after many years of service as chair of the department and Manufacturing faculty. It is with sadness and joy that we send him off to an eight hour retirement followed by a new challenge you can read about inside. As I take on the leadership of the department, I endeavor to guide our achievement with the same skill and wisdom that Jeff provided.

Our big changes include the start of construction on the Kaiser Bosari Hall which will provide the Electrical & Computer Engineering (EECE) program with a new home outside of the Ross Engineering Technology (ET) building. EECE is looking forward to utilizing this magnificent new teaching and research space. The department is diligently working with the College of Science & Engineering to determine what is the most beneficial relationship between the programs when split across the campus. The programs that will remain in the Engineering Technology Building - Polymer Materials Engineering (PME), Industrial Design (ID), and Manufacturing Engineering (MFGE) - are working to envision how the space vacated by EECE will enable great new opportunities for us to

better serve students in preparing them for industrial careers or graduate school.

We have had a lot of exciting facility changes within the ET building with a greatly improved Makerspace which now looks less like a storage mezzanine and more like an inviting space for students from Engineering & Design and from across the campus to exercise their creativity as they transform ideas into projects. Similarly, the MFGE program has a modified lab with three new CNC machines that give students new opportunities in advanced, multi-axis machining. We have had exciting personnel changes with the addition of two new faculty and two new staff. Enclosed, you'll get to meet Peng Gao (PME) and Justin Lund (ID). Our new staff are Awais Altaf (EECE) and Chris Jacaruso (Project Lab).

But not everything is changing. We still have a firm commitment to teaching and research that prepares our students for careers in industry or for the next step to grad school. This commitment has resulted in great achievements that have received recent recognition. Inside, you will read about our outstanding seniors, achievements in research on recycling ocean plastics, improving organic egg production, and low-power, wearable health electronics. I am very proud of the quality of the work from our students and faculty that has been recognized at conferences and through professional society awards. It is truly outstanding to see the ways that an undergraduate, teachingfocused department is able to compete in scholarship - a true testament to the efforts of our faculty and staff and the quality of our students.

And I end this recognition with a challenge to you – inside you will read of Juliana and Dan – students who value their WWU Engineering & Design education enough to start a scholarship to Pay it Forward for future students. I encourage you to come alongside these outstanding students and to help future students by growing this scholarship.

> Sincerely, David Gill

ENGD Student Club



SWE Attended WE Local

In March of 2023, nine members of the WWU Society of Women Engineers (SWE) club attended the We Local SWE conference in Seattle. The conference lasted for two days and attendees had the opportunity to listen to industry speakers, attend workshops and a career fair, and meet SWE members from other universities and within the professional world. The SWE club is very excited for future conferences, and they would like to thank Professor Sura Al-Qudah, Jodie Permen, Amy Lazzell, and the Engineering Department for their support in helping them attend the conference!



WWU Racing Team at Formula SAE Electric

At the end of spring quarter 2023, the WWU Racing Team traveled to the Michigan International Speedway to compete at Formula SAE Electric 2023 with their vehicle, Viking 64. This was the team's second one-year EV car. The team placed 29th overall, 10th in Business Presentation, 27th in Cost Event, and 34th in Design. The team is very grateful for all of the support from the staff and advisors at WWU. The team is excited to see how far they can go in the upcoming season.



ENGD SENIOR AWARDS

Our department recognizes the following 2023 graduating seniors for program-specific and industry awards, along with contributions to WWU.



Dominic Danis Electrical and Computer Engineering 2023 EECE Enterprise Award



Brendan Mudd Industrial Design Program honorable mention, Winner of the 2023 IDSA Student Merit Award for the West District (Western United States)

Shelby Powers

Electrical and Computer Engineering 2023 EECE Leadership Award Graduation Keynote Speaker, Spring 2023



Katana Sol Industrial Design Program honorable mention, WWU Alma Glass Hall Muralist

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OUTSTANDING GRADUATES

Being selected as an Outstanding Graduate is a high honor at WWU which is based on grades, research and writing, service to the campus and community, and promise for the future. We would like to congratulate:



Noah Crow Industrial Design



2022-2023

Aili Emory Electrical and Computer Engineering



Dan Struble Polymer Materials Engineering



William Watts Manufacturing Engineering

PAYING IT FORWARD

CC SCHOLARSHIPS, TO ME, ARE MORE THAN JUST MONEY. THEY OFFER ADDITIONAL TIME THAT CAN BE USED FOR RESEARCH, EXTRACURRICULARS, AND SERVING THE CAMPUS COMMUNITY.

> -DAN STRUBLE, WWU Alum, Class of 2023 POLYMER MATERIALS ENGINEERING Pay It Forward Scholarship Cocreator

During summer quarter, we got a chance to ask the 2022-2023 Outstanding Graduate of Polymer Materials Engineering (PME) Dan Struble, about an inspiring scholarship created by students.

Q: Good morning, Dan. Thanks for taking the time to chat about what you've been up to this year.

A: Hello. Certainly!

Q: So, could you tell our readers a little bit about the Pay It Forward Scholarship?

A: The Pay It Forward Scholarship is the brainchild of 2022 Outstanding PME Graduate Iuliana subsequently Covarrubias. established in collaboration with me. Juliana and I both were awarded significant financial assistance for school in the form of scholarships; but we recognize that there is a huge supporting cast of family, friends, faculty, and peers that that play a large role in helping us to merit the recognition of those scholarships. In appreciation for the support and opportunities they have provided, we choose to pay that assistance and opportunity *forward* to future PME students with a scholarship of our own.

Q: That's amazing, Dan! You said that you were a recipient of Engineering and Design Scholarships.

Why it was important to give back to our departmental scholarships, specifically?

A: [These] scholarships, to me, are more than just money. They offer additional time that can be used for research, extracurriculars, and serving the campus community. Scholarships also come with a tangible recognition that the work we do and the effort that goes into it are important to the world beyond our academic bubble; and provide ongoing motivation and inspiration to continue performing at a level that merits such consideration.

Q: Thank you for your work on this scholarship. We are deeply grateful to you and Juliana Covarrubias for *paying it forward*.

Help our department maintain academic excellence by contributing to the Pay It Forward Scholarship or the Engineering and Design Scholarship Fund. Your generosity directly impacts our students. Thank you.



ENGD students left to right: Lila Suchsland, Alexa Renshaw, Bree Carpenter, Kylea Assayag-Nodine, Isaac James, and Hadrian Morris-Downing, with owner of Day Creek Organic Farms, INC., Anh NguyenLe

DAY CREEK FARM PROJECT

he Day Creek Organic Farm project has engaged technical problem solution students in development to improve small and medium scale local farms. This summer, the project is split into two teams of students, both choosing to tackle production-limiting issues such as the distribution of bedding inside hen houses and the junctions created by current conveyor belt lavouts.

Alexa Renshaw, a Manufacturing Engineering junior, working on the bedding distribution project, shared her insight on this opportunity. "I'm really happy to be learning how engineers might operate within a company to solve problems," Renshaw reflected. "I think it's especially cool that we're working with a local farm, since it's shining light on the support they need to profit and how engineers can give back to communities."

This project has promoted collaboration in design, research, and engineering, allowing

U IT'S SHINING A LIGHT ON THE SUPPORT [LOCAL FARMERS] NEED TO PROFIT AND HOW ENGINEERS CAN GIVE BACK... ΩΩ

students to workshop in the Ross Engineering Building's project lab and elsewhere on campus over summer quarter. Learning opportunities past summer session.



Above: Manufacturing Engineering sophomore, Bree Carpenter, prototypes a rough draft of the students' first design meant to push eggs over the lip of a conveyor belt. Students are using the conveyor belt in ET 155 for testing.

Conference Highlights

ENGD Student/Faculty Conference Highlights from 2023



EECE REsearch Presented at SIAM CT

By Dr. Bhaskar Ramasubramanian

Electrical and Computer Engineering (EECE) Professor, Dr. Ramasubramanian presented research at the Society of Industrial and Applied Mathematics Conference on Control and its Applications (SIAM CT) in Philadelphia, PA during spring quarter 2023. SIAM CT is a biennial conference that brings together researchers from control, learning, and allied fields. This talk titled "Multiagent Reinforcement Learning with Prospect Theory" was the presentation of a published paper with the same title that contained work led by three WWU EECE undergraduates supervised by Dr. Ramasubramanian (Dominic Danis, Parker Parmacek, and David Dunajsky). The objective of the research was to develop a framework to learn `human-like' behaviors in unknown environments motivated by applications in autonomous driving. This research and travel to the conference was supported by an NSF CISE Research Initiation Award, WWU ENGD New Faculty Startup Funds, the WWU College of Science and Engineering, and an Early Career Travel Award from SIAM CT 23.

Student Participation Award Winners at IEEE MWSCAS

By Dr. Wala Saadeh

Dr. Wala Saadeh's EECE research students, Carson Failor and Austin Cable, received the "Student Participation Award" of the IEEE International Midwest Symposium on Circuits and Systems (MWSCAS) 2023 which was held in August 2023 in Phoenix, Arizona.

Along with poster session and volunteering at the conference, Failor presented the research papers supervised by Dr. Saadeh, titled, "Cardiac Arrhythmias Classification Using Machine Learning and Single-Lead ECG" and "Flexible EEG Headband with Artifact Reduction and Continuous Electrode Skin Impedance Monitoring for Neurological Disorders."

This undergraduate research trip was funded by the National Science Foundation.

Left: Austin Cable answering conference attended questions about the poster

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Above: Austin Cable (left) and Carson Failor (right) presenting a poster at the 2023 IEEE 66th International Midwest Symposium on Circuits and Systems (MWCAS) from August 2023 in Phoenix, AZ



Conference Highlights

ENGD Student/Faculty Conference Highlights from 2023

SAMPE in Seattle By Professor Nikki Larson

During Spring quarter, 2023, the Polymer Materials Engineering (PME) program took four faculty and 20 students to Seattle for the Society for the Advancement of Materials Process and Engineering (SAMPE) conference. During this conference WWU PME students presented seven posters (21 total were accepted, mostly from graduate students at institutions). other two conference papers, and one competition bridge.

A group of juniors (Tyrone Woodard, Ingrid Shipstead, Luke Grant, Nick Gajkowski) won first place in the poster competition, beating out all of the graduate students! The competition bridge (John Lehr, Kelsey Allis, Halka Inagaki, Dan Struble) took 5th place, again competing against graduate students. The papers that were presented were in the general session, not the student session, so that all industry and other academics could see the level of scholarship that our students reach. Those talks were given by Dan Struble and Claire Drury (then seniors).

In addition to student participation, PME Professor Nicole Hoekstra also presented research which was completed over a three-year period in collaboration with several undergraduate students.

Last, the conference was a great opportunity for faculty and students to connect with the 30-40 PME alumni brought to the event by industry or graduate studies. PME Alumni are exceptionally supportive of our program and the current students and routinely engage through our industrial advisory committee, employing our students, and sponsoring industry-relevant projects for the students to research.

Below: WWU's Polymer Materials Engineering students, faculty, and alumni pose for a group shot at the Society for the Advancement of Materials and Process Engineering Conference in Seattle, WA, during spring quarter 2023



SAMPE Poster Competition

Our congratulations to WWU's Polymer Materials Engineering juniors for winning first place in SAMPE's poster competition! Way to go!



Poster winners left to right: Tyrone Woodard, Ingrid Shipstead, Luke Grant, and Nick Gajkowski

WWU SAMPE Chapter's "Beam Team"

WWU's Competition Bridge team at SAMPE, took fifth place overall!

"The beam dream team was as beamy as it was dreamy. Using skills taught in class for a competition made the manufacturing process quite exciting and I got even closer to the people on the team." -Halka Inagaki, PME senior



Left to right: Kelsey Allis, John Lehr, Dan Struble, and Halka Inagaki

ENGD Program Spotlight: Polymer Materials Engineering

STANDOUT PROGRAM ENGAGEMENT IN 2023 BY DR. JOHN MISASI

PLASTICS RECYCLING CONFERENCE

In March of 2023, John Misasi and two Polymer Materials Engineering students, Jayme Perman and Taylor Hollcraft (photographed middle right), were invited to give the last keynote presentation at the Plastics Recycling Conference in Washington, D.C. on their research studying mechanical recycling of ocean plastics. Along with their research collaborator Scott Farling of Ocean Plastics Recovery, the team presented a 60-minute talk on the processes of recycling ocean plastics beginning with collection in Alaska to the remanufacturing being done with industry collaborators like HP, Inc.

This was Jayme and Taylor's first conference presentation, and it was



given to over 100 audience members, but their professional and engaging styles made for a great presentation. Many of the audience stayed after the talk for more than 30 minutes to discuss their research further and congratulate them on their work! It was a fantastic experience for all who attended and further propelled the ocean plastics research team and their collaborations!

ALASKA BEACH CLEAN-UP EXPEDITION

The summer research team for Ocean Plastics Recovery (OPR) at WWU went on a marine debris cleanup expedition in Alaska at the end of June 2023. The team included Polymer Materials Engineering graduates Jayme Perman and Mikaela Sadri (both graduate students at the University of Southern Mississippi), students Calvin Graff (senior), Meghan Gillaspy (junior), and professor John Misasi. Along with a group of 15 other volunteers and staff, the OPR team worked for one week in southeast Alaska to clean-up greater than 30,000 lbs of marine debris off beaches and intertidal zones. It was physically demanding, but extremely fulfilling work that will lead to the improvement of the environment and the education of sustainability-focused next generation polymer engineers!

New Faces ENGD Faculty and Staff that began in 2023



Muhammad Awais Bin Altaf, Ph.D Academic Project Engineer, Electrical and Computer Engineering

Muhammad Awais Bin Altaf was previously an Assistant Professor in the Electrical Engineering Department at Lahore University of Management Sciences from 2016-2023. From 2012 to 2013, he was a Digital Design Engineer at Design Solutions, Global Foundries, Dresden, Germany, where he was involved in the implementation of digital test chips in support of 20 and 14 nm technologies. His current research interests include analog and digital IC design, energy-efficient applied AI, and the development of ultra-low-power circuits and systems for wearable bio-medical applications. He loves to spend time with his family and exploring new places.



Peng Gao, Ph.D Assistant Professor, Polymer Materials Engineering

Peng Gao has been a Plastic Engineering postdoc at UMass Lowell for the last two years, and he had his Ph.D. and master's from Lehigh University, along with a bachelor's from Tsinghua University. His expertise spans upcycling plastic products and innovations to biopolymer materials for medical and sustainable applications. Now embracing a new chapter at WWU, Peng is enthusiastic about imparting knowledge to PME students through teaching and collaborative research. Beyond his academic pursuits, Peng finds joy in cooking, gaming, and jogging in the parks, which provide a creative balance to his scientific endeavors. Peng eagerly anticipates engaging with both students and faculty members, enriching the PME program, and advancing the domain of plastic engineering on a broader scale.



Chris Jacaruso, M. Ed. Instructional Classroom Support Technician, Project Lab

Chris Jacaruso was born and raised in the Washington DC area. He earned his undergraduate from the University of Maryland in education, and later a master's degree in educational leadership from the University of Montana. Chris has taught high school for 35 years. He is a very experienced user of all kinds of machines, tools, and equipment. Chris' life-mission is to share his talents, skills, and abilities with others to help them achieve their dreams. He loves working with students. Chris also loves being outdoors hiking, skiing, snowboarding, mountain biking, camping, and more. Chris is thrilled to be here at WWU.



Justin Thoreau Lund, MDes. Assistant Professor, Industrial Design

Justin Thoreau Lund is a professor of industrial design who strives to foster a collaborative mindset in students. Justin draws from his professional experience in product design, vehicle design, and exhibit design to introduce real-world teamwork and cross-disciplinary strategies. In his free time, Justin has regularly trained and performed improv comedy and has found the process of improvisation to be highly beneficial to teamwork and the design process. Many exercises, games, and warmups from this discipline have been known to find their way into the classroom. Don't worry, it's fun.



F A C U L T Y R E S E A R C H S P O T L I G H T

Wearable Medical Device Research Overview By Dr. Wala Saadeh, Professor of Electrical and Computer Engineering

hancing healthcare quality and improving access to health facilities while maintaining reasonable costs is challenging for healthcare organizations globally. The problem is further exacerbated by the rapidly increasing world population, and outbreaks of various infectious diseases. Cumulatively, these reasons raise serious issues for society. One way of tackling these issues that are gaining attention is the establishment of self-health monitoring systems to keep track of the health status of patients. A key technological solution in these devices is the low-power integrated circuits and sensors that enable long operation time and small form factors. In this context, my research focuses on developing reliable and ultra-low energy system designs for wearable medical devices.

Wearable devices have found numerous applications in healthcare ranging from physiological diseases, such as cardiovascular diseases, hypertension, and muscle disorders to neurocognitive disorders, such as Parkinson's disease, Alzheimer's disease,



and other psychological diseases. Different types of wearables can be used for this purpose, for example, skin-based wearables including tattoo-based wearables, textile-based wearables, and biofluidic-based wearables. Recently, wearables have also shown encouraging improvements as a drug delivery system; therefore, enhancing its utility towards personalized healthcare. These wearables contain inherent challenges, that need to be addressed before their commercialization as fully personalized healthcare systems. I aim to design low-power and high-precision wearable devices for physiological signs extraction to improve the diagnostic and treatment process of various diseases and overcome the limitations of the current technology.

After a rigorous nomination and selection process, my paper, "A Patient-Specific Single Sensor IoT-Based Wearable Fall Prediction and Detection System" has been selected to receive the 3rd Prize in the 2023 IEEE Engineering in Medicine and Biology Prize Paper Award. This paper was published in IEEE Transactions on Neural Systems and Rehabilitation Engineering. I have also been appointed as an associate editor (AE) of IEEE Transactions on Biomedical Circuits and Systems (TBioCAS) starting January 1st, 2024.

My work has been published in top IEEE journals and conferences in 2022-2023: (a few of them listed below)

A. A. Nauman, C. Failor, and W. Saadeh, "Cardiac Arrhythmias Classification Using Machine Learning and Single-Lead ECG," IEEE International Midwest Symposium on Circuits and Systems (MWSCAS), Aug. 2023, pp. 1-5
M. Sheeraz, A. Innayat, M. U. Nadeem, C. Failor, N. A. Khan, W. Saadeh, and M. A. B. Altaf, "Flexible EEG Headband with Artifact Reduction and Continuous Electrode Skin Impedance Monitoring for Neurological Disorders," IEEE International Midwest Symposium on Circuits and Systems (MWSCAS), Aug. 2023, pp. 1-5

^{4.} M. I. Dutt and W. Saadeh, "Monitoring Level of Hypnosis Using Stationary Wavelet Transform and Singular Value Decomposition Entropy With Feedforward Neural Network," in IEEE Transactions on Neural Systems and Rehabilitation Engineering (TNSRE), vol. 31, pp. 1963-1973, 2023.



^{1.} M. Sheeraz, C. Failor, A. Cable, N. A. Khan, E. M. Drakakis, W. Saadeh, and M. A. B. Altaf, "Flexible Wearable Biopatches for Physiological Monitoring using Dry Thin Gold Film Electrodes," IEEE Biomedical Circuits and Systems Conference (BioCAS), 2023, Accepted.

^{4.} M. I. Dutt and W. Saadeh, "Monitoring Level of Hypnosis Using Stationary Wavelet Transform and Singular Value Decomposition Entropy With Feedforward Neural Network," in IEEE Transactions on Neural Systems and Rehabilitation Engineering (TNSRE), vol. 31, pp. 1963-1973, 2023.

^{2.} M. A. Nauman, C. Failor, and W. Saadeh, "Cardiac Arrhythmias Classification Using Machine Learning and Single-Lead ECG," IEEE International Midwest Symposium on Circuits and Systems (MWSCAS), Aug. 2023, pp. 1-5 3. M. Sheeraz, A. Innayat, M. U. Nadeem, C. Failor, N. A. Khan, W. Saadeh, and M. A. B. Altaf, "Flexible EEG Headband with Artifact Reduction and Continuous Electrode Skin Impedance Monitoring for Neurological Disorders," IEEE International Midwest Symposium on Circuits and Systems (MWSCAS), Aug. 2023, pp. 1-5

FACULTY& ALUMNI **AWARD** HIGHLIGHTS

Jill Davishahl, Associate Professor and Director of First Year Programs, recently won the PNW Outstanding Teaching Award at the 88th Annual Pacific Northwest Section ASEE Conference at Gonzaga University. She also received recognition for her research associated with the design and impact of a new 100 level course for engineering students. The course, ENGR 101: Engineering, Design, and Society, which explores the linkage between engineering and social justice, received three awards at the annual ASEE conference in Baltimore, MD (right).



Davishahl shared: "I am extremely honored to receive this recognition from those who inspire me daily – fellow engineering educators, my WWU colleagues, and most importantly, my students. Thank you to everyone who has supported, challenged, and encouraged me along the way – I could not do the work I do without you."

WWU Alum **Brendan Mudd**, a 2023 graduate of Industrial Design, was recently selected as the **Industrial Designers Society of America (IDSA) Student Merit Winner for the West District**.

The competition is one of IDSA's longest running programs and highlights the very best creativity, problem solving and design brilliance in each of IDSA's five North American Districts. Student finalists



are selected by each participating school to represent their program at the District level. A jury panel of design leaders and educators representing a cross-section of professional practice and design academia is assembled annually to review and select District winners.

Check out some of Brendan's work, including his award-winning overdose prevention device Nove. Learn more about Nove in Western Today.

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RETIREMENT ANNOUNCEMENT (and a new role)



eff Newcomer, chair of Western's Engineering & Design Department for the past 11 years and a professor of Manufacturing Engineering at the university for 25 years, retired from Western with professor emeritus status to accept a new position in Denver, Colorado on August 1, 2023.

Newcomer said he was originally drawn to teaching at Western back in 1998 because of the university's academic rigor.

"It looked to have strong academic programs — it did and still does — and Bellingham seemed like it would be a great place to live, which it has been," he said.

Newcomer's leadership also expanded across Western's campus beyond his department; he held active roles as Faculty Senate president for a year, University Planning and Resources Council chair for six years, and Faculty Senate legislative liaison for two years. He also notably co-chaired a University Mission and Strategic Planning Committee and served on a Presidential Search Advisory Committee, as well as held numerous smaller positions in faculty governance over the years.

But of all his roles at Western, Newcomer said he is most proud of being part of the team that has helped the programs in ENGD continue to grow and improve.



"Probably the most significant event has been the switch to engineering programs from Engineering Technology, but the most important thing we've done is invest in the lower-division student experience and the establishment of the First-Year Programs Director position," he said, in reference to establishing Assistant Professor Jill Davishahl's role as First-Year Programs director in the ENGD Department in the fall of 2018, whose teaching, service, and research is devoted to increasing equity, social engagement, and a sense of belonging for first-year students.

These goals are met through courses, training Student Engagement Liaisons, and by running the ENGD Makerspace — a welcoming student hub on Western's campus that thrums with tools as such 3-D printers, laser cutters, and sewing machines, giving students a home base for collaborative projects and events.

"That investment has already had a huge, positive impact on the student experience," Newcomer said, "And it will continue to do so for years to come."

"It's been a privilege and honor to work with you, under your guidance and leadership. You made a profound difference to our office, department, and with our students." Amy Lazzell

Newcomer said he is preparing for his next student-centered leadership role. Though Jeff is retiring from Western with professor emeritus status, his retirement was short-lived, as he recently accepted the position of dean of the Metropolitan State University of Denver in August 2023. Newcomer has since relocated to Denver along with his wife, WWU Physics & Astronomy Associate Professor Kristen Larson, and said he looks forward to the new challenges with becoming dean and MSU-Denver's focus on student success

Newcomer said he felt fortunate to be part of the Western community.

"ENGD has a great group that has a long history of working well together to achieve the department's mission, so it's been a pleasure to be part of that team. I've also had the chance to work with a large number of great people on things outside of the department on all sorts of interesting problems," he said. "We're going to miss a lot of things about Western and Bellingham, but mostly we will miss the people."

Reflections on Newcomer's Tenure from Western Colleagues

"Providing a short testimonial for a well-rounded leader like you, Jeff, is hard!...I can confidently say that you are a genuinely fantastic leader, educator, and person!"

Associate Professor Sura Al-Qudah, Manufacturing Engineering

"Jeff always has a wealth of information stored in his brain. From procedures to tasks to technical information – the man is amazing!" **Professor Nikki Larson**,

Polymer Materials Engineering

"It's been a privilege and honor to work with you, under your guidance and leadership. You made a profound difference to our office, department, and with our students. You're genuinely a caring person and a fabulous leader!"

Administrative Services Manager Amy Lazzell, Engineering and Design Department

"Supportive mentor, strong advocate and wonderful colleague"

Associate Professor Tarek Algeddawy, Manufacturing Engineering

For more reflections, read the full article in Western Today, here.



Looking

Breaking Ground



In last year's newsletter, we shared about the exciting building project on campus for Kaiser Borsari Hall; Western's new electrical and computer engineering, energy science, and computer science building. May 20, 2023, marked the official groundbreaking ceremony (above, left).



As of the start of fall quarter 2023 (above), the foundation is complete and there is a crane allowing crews to begin building vertically. The project is on schedule to be open for classes starting January 2025. For more information, visit: Kaiser Borsari Hall Building Washington's Future.

Forward

BUILDING UPDATES AND RENOVATIONS FOR OUR BRIGHT FUTURE





Makerspace Renovation

Contractors were busy this summer renovating the makerspace. Upgrades included additional electrical outlets, fresh paint, and a new projection system. More notably, there is now a wall (with windows!) that provides separation from the downstairs lab area which greatly improves ventilation and sound. The makerspace is open to all WWU students in the afternoons and evenings and is used as a teaching lab for pre-major students in the mornings. We are looking forward hosting workshops, events, and providing support for student make-do-build experiences.



Manufacturing Lab Updates

Manufacturing Engineering purchased three new CNC machines and a CNC plasma cutter for student labs. There are now three 5-axis machines in the lab. A new reconfigurable lab layout with inmetrology, mobile teaching shop stations, and refinished floors give the experience of a company production facility. The funding came from student fees, an internal WWU grant, and donors. The lab is used by MFGE, PME, and ID students for classes and projects. The lab also serves student clubs like Formula SAE, SAMPE, SME.



IAN TAMNGIN WWU ALUMNI, BS, MANUFACTURING ENGINEERING MANUFACTURING ENGINEER @ THE BOEING COMPANY











TECHNOLOG

8 ENGINEERIN

INTERNSHIP FAIR

Thursday, November 2

11 a.m. - 2 p.m.

Viking Union | Multi-Purpose Room

Free for all students and alumni! Explore careers in computer science, tech, and engineering! Learn more at www.joinhandshake.com A collaboration between the Career Services Center & the College of Science & Engineering.

Old Main 280 Tel 360-650-3240



Credits

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ENGINEERING **AND DESIGN** DEPARTMENT



MAKE WAVES.

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