



# CORNERSTONE

The Hal and Inge Marcus School of Engineering

Fall 2023-Sept/Oct



## FIRMLY INTO FALL

Here we are half-way into Fall semester! Students will be taking midterms next week. Our student clubs are having their first meetings of the year and electing officers!

We are also busy planning for upcoming events – please save these dates on your calendars!

**November 29    Time (TBA)    Cebula 3rd Floor**

**Fall Speaker: Ken Deans of KD Production Services. Co-hosted by HIMSE and SMU School of Business.** A seasoned veteran in producing live events, Ken consults and performs operations management, as the Director of Logistics, annually around the world for many festivals and companies including: Coachella, Stagecoach, BottleRock, Thunder on The Ohio and the World’s largest grossing multiday outdoor event-- Desert Trip. Ever wonder how events like these are managed – how a small ‘city’ of operations is put together and taken apart for a multi-day event? Operations like these are much like managing a project. Come and here from an expert on how it’s done successfully.

**February 21 8AM-1PM    Engineering Awareness Day**

Multiple stations for high school groups to learn about civil and mechanical engineering and computer science and technology!

**February 23 6-9PM    Engineering Banquet**

Our annual event for the HIMSE community! Socialize, network, learn about this year’s senior design projects, hear an amazing guest speaker. More to come and how to buy tickets in January! Watch for the notice in the January newsletter, email notices, or website information! Plan to come!



## CONTEST – WIN A PRIZE!

This question was asked in the July newsletter: The first accredited engineering program at Saint Martin’s was Civil Engineering. What year was this accreditation awarded? **The answer was 1969 (October).**

The correct answer was sent in to us by new transfer student, **Taylor Beigh** (shown at left). Taylor comes to us from the Oregon Institute of Technology, majoring in Mechanical Engineering. Over the summer he did a Construction Technology Engineering internship with Olympia’s Granite Construction, where he flew drones, tested asphalt quality, and worked with advanced technologies in the intelligent compaction side of paving. In his

free time, you can find him in his garage working on one of his motorcycles or enjoying the great outdoors. As his prize, Taylor received a multi-tool pen (incl. pen, stylus, level, flathead and Phillips screwdrivers, and ruler)! Here’s the next question for some lucky reader. Again, send all answers to [engineering@stmartin.edu](mailto:engineering@stmartin.edu). First correct one wins something different, but equally useful!

**Question: Who is known as both the Mother of Computer Science and the first Computer Programmer? Good luck!**

## FE EXAM PREP OFFERED IN SPRING 2024

In Spring 2024 semester, the Hal & Inge Marcus School of Engineering will offer GE 495 FE Exam Prep-Pt 1 for CE & ME in Term 10 for general engineering review with multiple modules offered by experienced faculty, along with CE 495 FE Exam Prep-Pt 2 CE-specific review and its corresponding ME 495 ME-specific course offered in Term 11.

**This round will be offered Fridays from 12-1 p.m., starting Friday, January 12.** These courses are 0-credit for our CE/ME seniors, so they don’t have to worry about extra expense or credit overload for this career-critical review. Working engineers pay a nominal fee of \$250 for each of these multi-module courses. Please pass the word on about these courses and anyone interested in the Spring 2024 cohort should contact us at [engineering@stmartin.edu](mailto:engineering@stmartin.edu) for more information by December 31st or current seniors can just add them to their spring schedules.

## HIMSE GOLFERS REPRESENT!

HIMSE fielded a team of golfers for the 40<sup>th</sup> Annual Saint Martin’s Golf Classic taking place in August 2023. The tournament supported student-athlete scholarships at St. Martin’s University. The team representing the “Cebula Steelheads” included **Joseph Akada** (BSCE Class of 2022), **Dr. Floraliza Bornasal** (BSCE Class of 2009, current faculty), **Sydney Brown** (BSCE Class of 2023, current graduate student), and **Tia Taitingfong** (current ME student). The team shot a 74 for the round, with Tia winning “longest drive” amongst all the women competitors at the tournament. Team photo, courtesy of SMU, at right: Dr. Floraliza Bornasal (front); l to right: Tia Taitingfong, Sydney Brown, and Joseph Akada).



## CAST IN STEEL 2023

(written by Ms. Shelbie Wickett, Team Advisor)

Our HIMSE Cast in Steel Team attended the Steel Foundry Society of America (SFSa) Cast in Steel Competition in April 2023. This is the fourth year HIMSE has competed in the competition. Each year, the students are challenged to design and cast a specified tool. This ranges from bowie knives to Thor's hammer. The most recent competition task was to design and cast an African spearhead. The team designed several spearheads, performed simulations to determine their performance, then 3D-printed models for casting. Once their spear was submitted to the competition, the team traveled to Cleveland, Ohio to participate in the test sequence. The tests involved stabbing the spearhead through a steel plate and slicing through a carpet sample. The spear was then evaluated for deformation, and its overall performance was assessed. Also, on the trip were Team Advisor, Ms. Shelbie Wickett, MME, and Team Chaperone, Mr. Miguel De La Melena, MSME '22. HIMSE's team made it to the final round (top eight submissions). This is a significant accomplishment, as HIMSE competed with 31 schools, including some that have specific metal casting programs. [Congratulations to the team and Ms. Wickett!]



(left to right) Caden Rebollo, Andrew Horton, Uriah Camacho, Jake Stewart, Kaylah Tibbits, Mary Brownell. Not pictured: Ms. Wickett and Mr. De La Melena

## DEAN OLWELL AWARDED

Our own **Dr. David H. Olwell** was awarded as a 2023 Veteran Champion of the Year in Higher Education by G.I. Jobs and featured in their 2023-24 Guide to Military Friendly Schools – Fall Edition (pg. 15 at link). From his nominator: “Dr. David Olwell has worked tirelessly to ensure the best educational opportunities for veterans... David H. Olwell is one of the leading reasons that Saint Martin’s University has earned Military Friendly School Gold Designation for the 5th consecutive year and is the first designated Purple Heart University in Washington State. His dedications to these military-affiliated students, whether degree-seeking or excelling in the WAV2T program, is definitely award-worthy!”  
Congratulations, Dean Olwell! [READ MORE](#)

## WAV2T STAFF REPRESENTS AT JBSA CAREER SUMMIT

**Amanda Rendon**, WAV2T Assistant Director of Admissions, attended the Joint Base San Antonio Career Summit at the Boeing Center at Tech Point, hosted by Hire Our Heroes in San Antonio, TX, on August 2-3. Amanda was there to increase awareness for our program with potential students and to connect with hiring partners in the state of Texas. She interacted with 35 potential students and 23 of them signed up to receive more information. Great job, Amanda!



Amanda Rendon (far right) talks with career summit attendees about WAV2T program

## GETTING TO KNOW THE FACULTY

**Mr. Joel Nonnweiler**, Full-time Instructor, Computer Science, has Masters of Science in Computer Systems/Software Engineering and Military Operational Art and Science. He is an experienced educator, coming to us most recently from the University of Hawai'i, West O'ahu, where he taught Information Technology, Facility Management, and Cyberspace Security. Mr. Nonnweiler is a retired Lt. Colonel, U.S. Air Force, with over 25 years of service. He teaches for us with the WAV2T program.



**Mr. Douglas Howie** MEM '94, Adjunct Lecturer, Civil Engineering, has been teaching for Saint Martin's for over 20 years! Currently, he teaches Surveying with lab, Statics, and Water Resources Engineering. He has been an environmental (stormwater) engineer with the WA State Dept. of Ecology since 2009. Doug has over 30 years of experience in water, wastewater, and stormwater master planning, hydraulic modeling, and design. He is a registered Professional Engineer in WA, ID, OR, and AK.

**Dr. Tapas Das**, PE, DEE, FAICHe, FIIShE, FICS, has been an SMU Adjunct Lecturer for Civil Engineering and the Masters of Science in Environmental Engineering for over 18 years! He has a bachelor's and doctorate in Chemical Engineering. His research and key areas of publication are energy, environmental, chemical, pulp/paper processing, clean technology, as well as air, water, and wastewater pollution control, sustainability, and reclamation. He is a registered Professional Engineer in WA and WI.





**Dr. Jintae Lee**, Adjunct Lecturer, Civil Engineering, currently dam safety engineer with Washington State Department of Ecology, has been teaching at Saint Martin's since 2016. Prior to joining the state agency, he worked as a geotechnical engineer in Wisconsin. He has more than 20 years of professional background in both industry and research combined with teaching experience, especially the analysis of pile foundation, slope stability, soil retaining wall, soft ground improvement and site investigation, including in-situ tests and lab tests. He obtained his Ph.D. in 2008 and is a registered Professional Engineer in the states of WA, OR, WI, and MI.

**Dr. Bijan Khaleghi**, Adjunct Lecturer, Civil Engineering, has been teaching for Saint Martin's since 2009. Dr. Khaleghi recently retired from 30-plus years with Washington State Dept. of Transportation as a Bridge (Design) Engineer. He has a doctorate in Concrete Structures and masters' degrees in both Structural Engineering and Civil Engineering. Dr. Khaleghi currently teaches bridge engineering and design, prestressed concrete design, and earthquake engineering.



## FACULTY NOTES – NOTED FACULTY



**Dr. Shahlaa Al Wakeel** recently attended North Thurston High School Career Fair on October 3rd. She shared information about our Mechanical Engineering program to recruit students. Dr. Al Wakeel (at right in photo) led the effort and was accompanied by **Ms. Shelbie Wickett**, ME Instructor and HIMSE Lab Manager (at left in photo). They distributed flyers and other materials, and engaged with about 30 students and parents, who showed keen interest in our programs. Per Dr. Al Wakeel, "It was definitely a fruitful venture." Thanks for your efforts, Dr. Al Wakeel and Ms. Wickett!

**Dr. Floraliza Bornasal**, along with co-authors **Dr. Matthew Barner** (University of Portland), **Dr. Shane Brown** (Oregon State University), and **David Linton** (Associate Principal at Mackenzie), received the William Elgin Wickenden Award of the American Society of Engineering Education (ASEE) for their paper titled, "Tangibility of representations in engineering courses and the workplace". The annual Wickenden Award, which was given during the 2023 ASEE National Conference, reflects the "highest standards of scholarly research in engineering education". The article was published in the January 2022 issue of the Journal of Engineering Education (JEE). [READ MORE](#)

Dr. Bornasal also recently received word that an issue paper she co-wrote with **Dr. Shane Brown** (Oregon State University) was accepted for publication in *Groundwater*. The issue paper is titled "Learning Theories Applied to Teaching and Improving Hydrogeological Conceptualization."

Congratulations, Dr. Bornasal! **Direct link to their paper:**

<https://onlinelibrary.wiley.com/share/author/GZBVP2XRN3NRZARHFZ4B?target=10.1111/gwat.13360>.

**Dr. Tapas Das** attended and presented a paper on "Sustainability Concepts in the Food-Energy-Water Nexus" at the International Congress on Sustainable Science & Engineering, September 19-21, 2023, in Houston, Texas.

**Dr. Shawn Duan** has co-written two technical papers accepted by the ASME IMECE 2023 proceedings after rigorous blind peer review.

Butler, F., Duan, S. Z. (2023) "Parameter Analysis Of Spherical Pulsation Damper Using Ansys Fluid-solid Interaction" ASME 2023 IMECE Proceedings, Paper # IMECE2023-116319, pp. 1-15.

Song, Y. X., Duan, S. Z., (2023) "Design Improvement And Field Testing For Biogas Power Generation System" ASME 2023 IMECE Proceedings, Paper # IMECE2023- 111642, pp. 1-7.

He and one of his fellow authors, **Finnley Butler** MSME '23, will present these papers October 29-November 2 at the ASME IMECE 2023 in New Orleans, Louisiana.

**Dr. Shahlaa Al Wakeel** attended the Engineering Mechanics Institute Conference on Probabilistic Mechanics & Reliability in Atlanta, Georgia, June 6-9. Per Dr. Al Wakeel, "The conference provided an opportunity for professionals to share their latest research and advancements in engineering mechanics and its applications. It was a fulfilling experience to engage with fellow researchers and discuss topics that align with my own research interests. Overall, it was a valuable and enriching experience that has inspired and motivated me to continue pursuing my passions in the field."



Lacey Makerspace staff Ian Martin (left) assists Dr. Shahlaa Al Wakeel (right) with her project work.

While working on her research project over the summer, Dr. Al Wakeel used the Lacey Makerspace resources. Dr. Al Wakeel noted, "The staff and volunteers were extremely helpful in providing me access to a variety of woodworking equipment to create molds. These molds will be used to collect data related to the fracture behavior mechanics of heterogenous materials." Many thanks to the Lacey Makerspace!

## OUR ALUMNI AND WHAT THEY'RE UP TO

**Brenda Arellano MSCE '21** recently started a new position as a Structural Engineer at Dewberry. Congrats, Brenda!

**Ryan Haseman**, PE BSME '17 was promoted to Engineering Supervisor with the Washington Water Service. Great job, Ryan!

Congrats to Saint Martin's alumna **Melissa Roth** BSME '17 and the Off Planet Research team for securing a research grant of \$996,708 from the National Science Foundation (NSF). These funds will support their cutting-edge work on advancing the "Portable Production Process for Icy Regoliths by Vapor Deposition."

Co-founders **Vince Roux** MME '21 and Melissa Roth first met while Roth was pursuing her mechanical engineering degree at Saint Martin's University. Roux approached her with an idea for a company dedicated to creating unique and sought-after simulants from extra-terrestrial environments for testing space technology and conducting research and development. [READ MORE](#)

**Rocky Lightfoot**, MEM '21 started a new position as Environmental Engineer, Project Manager at Public Health Command-Pacific, JBLM, WA. Congratulations, Rocky!



**Nathan Martinez** (left in photo) BSME '23 checked in to tell us about his new job as an engine installation engineer at Kenworth up in Kirkland, WA. He also works with another recent graduate, **Andrew Horton** (right in photo) BSME '23, also an engine installation engineer. Per Andrew, "Nate is doing an awesome job working on our team. **Jake Stewart** will be joining us soon too!" It's great that all of you can work together!

## Work-iversaries—Congratulations to you all!

### 2 years—

**Elias Wilson** BSCE '21, Transportation Engineers, WA State Dept. of Transportation

**Jacob Eaton** BSME '19, Module Engineer, Intel Corporation

**Sam Salamah**, MEM '20, MSCE '21, Civil/Railway Designer, Hanson Professional Services, Inc.

**Brandon Metra**, BSME '19, Mechanical Engineer, Honeywell

**Sonia Diaz Guzman**, MME '23, BSME '21, Traffic Design Engineer, WA State Dept. Of Transportation

### 7 years—

**Nick Mayfield** BSCE '19, Project Engineer, SCJ Alliance

### 12 years—

**Vijay Chaudhary**, PE MCE '07, Project Engineer, Krazan & Associates, Inc.

## CONTINUE THE COMMUNITY WITH LINKEDIN

Don't forget to join our LinkedIn groups to continue to keep the community vibe alive – network with each other, mentor our students, and share information about scholarships, internships, and job opportunities. All SMU staff, faculty, students, monastic members, alumni, and community supporters are welcome to join these groups and participate in the community!

[CLICK HERE TO JOIN THE ENGINEERING GROUP](#) (civil and mechanical engineering)

[CLICK HERE TO JOIN THE COMPUTER SCIENCE GROUP](#) (computer science and information technology)

## CALENDAR AND EVENTS

- ❖ Oct 16-20 Mid-terms for Fall Main/Finals for 08/10
- ❖ Oct 23 Fall Main midterm grades due  
Fall 09/11 terms start
- ❖ Oct 23-24 Fall Break for Lacey 16-week session ONLY  
Classes for 09/11 terms start as scheduled
- ❖ Oct 24 Final grades for 08/10 terms due
- ❖ Oct 30 Add/drop deadline for Terms 09/11
- ❖ Nov 1 Advising Day (no Lacey classes)
- ❖ Nov 10 Veterans Day/Saint Martin's Day (observed)  
HOLIDAY
- ❖ Nov 13 Priority registration starts for Spring 2024
- ❖ Nov 17 Last day for Withdrawal from Fall Main
- ❖ Nov 20 Mid-term grades due for Terms 09/11
- ❖ Nov 22 Thanksgiving Recess; no Lacey classes; JBLM classes meet (university open)
- ❖ Nov 23-24 HOLIDAY- Thanksgiving recess (university closed)
- ❖ Nov 29 HIMSE Speaker Series: Ken Deans
- ❖ Dec 1 Last day for Withdrawal for 09/11 terms
- ❖ Dec 8 Saint Thomas Aquinas Study Day (no classes)
- ❖ Dec 11-15 Main Fall 2023 final exams
- ❖ Dec 16 Conferral date for Fall graduates
- ❖ Dec 19 Final Grades due to Registrar for Main/09/11
- ❖ Dec 16-Jan 7 Winter Break (faculty/students)
- ❖ Dec 22-Jan 1 Winter Break (staff)
- ❖ Jan 6 Residence halls open
- ❖ Jan 8 Spring Semester 2024 Main/08/10 starts
- ❖ Jan 12 Add deadline for Spring Main
- ❖ Jan 15 HOLIDAY – Martin Luther King Jr Day
- ❖ Jan 16 Add/drop deadline for 08/10 terms
- ❖ Jan 19 Drop deadline for Spring Main
- ❖ Feb 5 Midterm grades due for 08/10 terms
- ❖ Feb 16 Last day for Withdrawal for 08/10 terms
- ❖ Feb 19 HOLIDAY – Presidents Day



**HOLD THE DATE! FRIDAY, FEB. 23 ENGINEERING BANQUET  
WATCH FOR EMAILS AND INFO IN JANUARY NEWSLETTER FOR DETAILS AND HOW  
TO GET YOUR TICKETS!**

### CONTACT US – PLEASE!

If you are one of our alumni and have anything to share (position/company changes, professional achievements, or personal life accomplishments–wedding, children, anniversaries, etc.) please send your input to [engineering@stmartin.edu](mailto:engineering@stmartin.edu).





## DEAN'S CORNER

As I write this, the campus is working through some very difficult budget issues. More information will be forthcoming. These issues are not a threat to the survival of the engineering school or the university, but they are painful for the staff and faculty who do the hard work of educating our students. We do not expect any diminishment on the quality of experience for our students.

We hosted the accreditation team from the Computing Accreditation Commission (CAC) of ABET in September for the initial accreditation of the BSCS and BSIT programs. This visit went well. We have two issues with each program to resolve with the visiting team this school year, and we are on it. The entire Department of Computer Science deserves congratulations for the progress made to date, especially **Dr. Radana Dvorak**, the Chair of the department.

The new ME Chair, **Dr. Frank Washko**, and the new CE Chair, **Dr. Floraliza Bornasal**, along with Dr. Dvorak, are doing a great job. They are engaging the community and looking at new curricula options to continue to meet the needs of the community and to attract students. Proposals underway include an artificial intelligence and robotics degree and a cybersecurity degree. We are hopeful of final approval of the industrial design engineering and manufacturing degree at the November board meeting.

Our guest speaker this fall will be **Mr. Ken Deans**, who has been the logistics program manager for the Coachella music festival for over a decade, managing a \$100M effort each spring that includes erecting and then dismantling temporary housing for 15,000 workers, and the provisions of food service and other utilities to the site. This is an excellent project / engineering management topic with wide appeal across campus! I've known Ken for 55 years, and I am delighted that he will spend his time with us. He will be on campus 29 November, and we will publish the itinerary shortly.

The Gala is around the corner, and I hope to see many of you there. I appreciate your support, especially for the paddle raise for Feed-a-Mind, which directly supports students with much needed scholarships. I am grateful to the members of the engineering community who have organized tables and purchased seats. We are hoping for a very good Gala this year!

I'd like to acknowledge **Tam Léger**, who puts this newsletter together for us, in addition to her many other duties and contributions. Thanks, Tam!

Best wishes,

**David H. Olwell, Ph.D., Professor and Dean  
Hal & Inge Marcus School of Engineering**



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