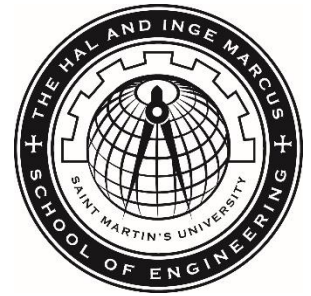




Saint Martin's
UNIVERSITY



CORNERSTONE

The Hal and Inge Marcus School of Engineering

Fall 2021- December



WISHING YOU A BLESSED HOLIDAY SEASON!



The semester is going well. We continue to work within the pandemic parameters to ensure state compliance and to keep everyone safe and healthy. The good news is that we will be able to continue to offer classes primarily in-person, with a few online exceptions, for the upcoming Spring 2022 semester! Please continue to be kind and respectful of each other regarding this situation. Stay healthy and hopeful that, in 2022, it will all go back to the best conditions for us all!

Everyone here wishes you and your loved ones, the best of this season – goodwill, peace, and hope, now and always!

HOLD THE DATE!

Time is fast approaching for our 70th Annual Engineering Banquet! We're back to an in-person event and looking forward to reconnecting with you all! Invites will go out January 10, 2022, so look for yours! If you want to attend and don't receive an email, please let us know at engineering@stmartin.edu. Our community grows every year and we want everyone to have the opportunity to attend this annual event and support our programs! More information will be posted on our webpage, so keep an eye on it for updates on this event and how to get tickets.

Here's what we have confirmed so far:

Friday, February 25, 2022 * 5:30-8:30 p.m. * Norman Worthington Conference Center (SMU campus)

We'll host a social, have a great dinner, do some networking, present student project posters, hear some amazing speakers, and enjoy great company – yours!

PLEASE JOIN THESE LINKED IN COMMUNITIES

Saint Martin's HIMSE Engineers: Primarily for current and former faculty, partners, students, alumni, and mentors of our Civil Engineering, Mechanical Engineering, and engineering master's programs and meant to encourage networking, mentoring, sharing of information, potential jobs or internships, or just anything you all want to share with each other to keep the community alive! [TO JOIN THE ENGINEERING GROUP](#)

Saint Martin's HIMSE Computer Science: Primarily for current and former faculty, partners, students, alumni, and mentors of our Computer Science, Information Technology, MSSA, WaV2T, and computer science master's programs. This group is for you to keep your community strong by networking, sharing information, posting jobs or internships for your tech family! [TO JOIN THE COMPUTER SCIENCE GROUP](#)

SCHOLARSHIP PARTNERS

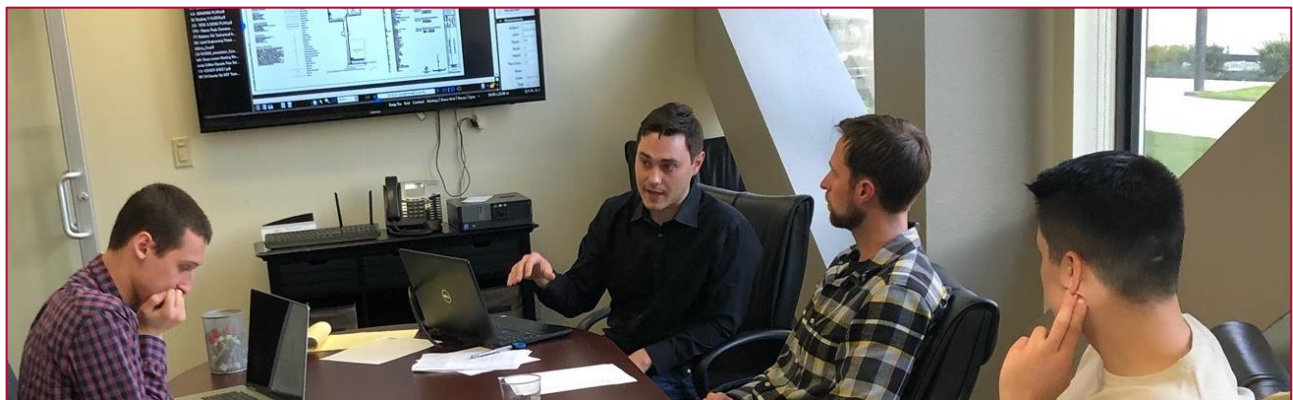
Our featured scholarship provider in this issue is KPFF Consulting Engineers. The company was founded in 1960 and is a full-service civil engineering, structural engineering, environmental, and surveying services firm. KPFF now has offices in 22 different cities across the country and provides continuous assistance to federal, state, and local agencies, as well as private developers.

The Lacey office opened in 2006, with a team who are committed to assisting clients with civil engineering and survey projects. Lacey utilizes local professionals who thrive on designing cost-effective solutions. Their culture is based on the guiding principal of providing high quality service to clients, while placing the highest value on personal and professional relationships established through our work. They strive to provide experiences that create a lasting positive impact on people, clients, and community.

According to KPFF representative, Blake Lord, P.E., "The Lacey staff currently includes three SMU alumni and continues involvement by participating as design mentors for the senior design classes. Over the last six years, the Lacey office has sponsored multiple senior design projects, including attending design presentations and providing constructive feedback."

KPFF has awarded a scholarship over the last two school years to a current junior in SMU Civil Engineering. One of KPFF's core values is to provide a long-lasting impact to the community and they recognize that SMU is an integral part of our local community. As such, KPFF has conditioned this scholarship to be for SMU students only.

The 2022 KPFF scholarship will be accepting applications starting in March 2022 and highly encourages all junior civil engineering students to apply. KPFF is aware that other scholarship applications can take a large amount of effort and usually require an essay, because of this KPFF has taken the time to develop a simple questionnaire application that can be completed within an hour and does not require an essay.



Blake Lord, P.E., KPFF representative, (back right in black shirt) meeting with a 2020 Saint Martin's CE senior design team.

ASME IMECE NOVEMBER CONGRESS

The following student papers were presented at the virtual ASME International Mechanical Engineering Congress & Exposition (IMECE) November 1-5. The event is the largest interdisciplinary mechanical engineering conference in the world, with more than 1,000 technical sessions. **Dr. Shawn Duan**, Chair of Mechanical Engineering and co-author of the student papers, said, "All of the students did an excellent job of presenting their research work." (Those presenting their papers with pre-recorded talks at the congress are bolded and in red.)

- **Roux, Vincent**, Duan, S. Z., (2021) "Characterizing Potential Damage to Landers and Their Payloads Caused by Regolith Ejecta during Operations on or Near the Surface of the Moon, Mars, and Other Worlds" [READ MORE](#)
- **Alnouser, Ali**, Andergeri, T., Duan, S. Z. (2021) "Design and Prototype of An Electric Pollen Extractor" [READ MORE](#)
- **Islam, Ariful**, Campbell, C., **Merrikin, Christian**, Duan, S. Z. (2021) "Rapid Design and Analysis of Versatile Robotic Platform" [READ MORE](#)
- **Guzman, Sonia Diaz, Henspeter, Devon, Taylor, Megan**, Duan, S. Z., (2021) "Drone Pollination of Flowering Vegetation for Agricultural Applications" [READ MORE](#)
- **Duan, Lee**, Newcomer, L., **Thompson, Alice**, Duan, S. Z. (2021) "Biogas Upgrading System for the Generation of Electricity from Methane Combustion" [READ MORE](#)

PI TAU SIGMA FALL 2021 INDUCTIONS

On Wednesday, November 3, 2021 the Alpha Tau Chapter of Pi Tau Sigma held their Fall Induction Ceremony. Lee Duan and Benjamin Tan were inducted into this international honor society for mechanical engineering students.

Pi Tau Sigma is the honors society for Mechanical Engineering students. Its members are chosen on the basis of sound engineering ability, scholarship (upper 35% for seniors, upper 25% for juniors), personality, and probable future success in their chosen field of Mechanical Engineering. The Alpha Tau Chapter of Saint Martin's was initiated in 2003 and has been going strong ever since.

Congratulations to Benjamin and Lee for this outstanding achievement!



(L to R) Morgan Smith, Patrick Conerty, Lee Duan, Dr. Daniel Einstein, John Rambo, Benjamin Tan, Alexandria Miller.

SOIL MECHANICS STUDENTS ASSIST WITH CITY OF YELM-SPONSORED PROJECT

(co-written by **Dr. Corrie Walton-Macaulay** and **Dr. Floraliza Bornasal**)

“Education is that whole system of human training within and without the school house walls, which molds and develops men (and women).” – W.E.B. Du Bois

Several miles away from the school house walls at Saint Martin’s University, outside, under cloud cover and moderately cool temperature, the students and instructor of CE321 – Soil Mechanics course were on site at the City of Yelm Park performing a geotechnical site investigation. On site early at 8am on October 28th, the students met with the City of Yelm Public Works Director, Tobie Stevens for this soil investigation project. The backhoe seen on the left side of the photo was used to excavate test-pits to about 5 feet in depth, allowing the students to visually classify the existing soil stratigraphy and perform field tests for strength. The visual classification includes determination of particle size (gravels, sands, fines), moisture, color, organics, plasticity, soil type, etc.). Samples of the soil were taken to our materials lab back on campus where the students are performing further testing. The field and lab test results will be submitted to the Senior Design teams to support their design process. (CW-M)

These soils investigations support two of the civil engineering Senior Design project groups, who are developing conceptual designs for the Yelm City Park. Specifically, the Senior Design projects entail designing new amenities and upgrades at the park including renovating the pavilion and stage area, designing a paved parking lot, designing accessible pedestrian paths, and designing a veteran’s memorial. Findings from the CE 321 students’ work will be utilized by the Yelm City Park senior design groups (includes students **Joseph Akada, Michael Remer, Noah Dollente, Troy McCormick, Alex Arana, David Echaniz, Nehemiah Protsman**, and **Isaac Hernandez**) as they design foundations, stormwater facilities, and pavement structures. (FB)

Many thanks to Derek McCoy, City of Yelm Public Services Civil Review Engineer and Tobie Stevens, City of Yelm Parks Operations Lead for their invaluable assistance!



(left to right) Dr. Corrie Walton-Macaulay, Benjamin Bridge, Andrew Boyd, John Gonzalez, Maddie Wolff, Annika Briggs, Sydney Brown, Liz Himes, Danielle Miller, Aaron Schnitger, Aaron Bagoaisan, KJ Kaminanga, Raiden Ueki

IMPORTANT SUMMARY JUDGMENT FOR ENGINEERS



One of our EAB members, Sharon Zimmerman, brought this recent Superior Court of Washington ruling to our attention at our September EAB meeting and we want to make sure you are all aware of this and pass on the news. Paul Tappel, a professional engineer in the state of Washington, and his engineering firm Fisheries Engineers, Inc. sought declaratory and injunctive relief against the Board of Registration for Professional Engineers & Land Surveyors (BRPELS) regarding the use of the title “Engineer” in work titles. They started this process in 2018 and recently received summary judgment on their petition.

RCW Chapter 18.43 sets forth the law upon which the qualifications, testing, licensure, and regulation of

professional engineers and land surveys in the state is based. RCW 18.43.010 states “In order to safeguard life, health, and property, and to promote the public welfare ... it shall be unlawful for any person ...to use in connection with his or her name or otherwise assume, use, or advertise any title or description tending to convey the impression that he or she is a professional engineer or a land surveyor, unless such person has been duly registered under the provisions of this act.” It also defines the term “engineer” to mean a “professional engineer”.

The Superior Court’s judgment in the case was that the use of the title “Engineer,” or any variation thereof, necessarily tends to convey the impression of licensure when it is used by someone who either engages in the practice of engineering or who works within an agency, organization, or business that engages in or offers engineering services and is not a registered professional engineer. It also found that, while at one point both BRPELS and the Attorney General properly interpreted the state law that their current interpretation and enforcement policies violate it in their advertising and providing Engineering titles to employees who are not duly licensed engineers. So, based on this ruling, the unlicensed use of the title “Engineer” is unlawful and inconsistent with existing state law (RCW 18.43) when used by someone who is not a registered (licensed) professional engineer.

Under the RCW 18.43.020 Definitions, it states “A person shall be construed to practice or offer to practice engineering, within the meaning and intent of this chapter, who practices any branch of the profession of engineering; or who, by verbal claim, sign, advertisement, letterhead, card, or in any other way represents himself or herself to be a professional engineer, or through the use of some other title implies that he or she is a professional engineer; or who holds himself or herself out as able to perform, or who does perform, any engineering service or work or any other professional service designated by the practitioner or recognized by educational authorities as engineering. It was determined that there are a number of individuals and the companies they work for within the state that are giving them titles of “Engineer” or allowing them to use the title on their business cards, nametags, email or other correspondence signature blocks, position descriptions, website or other media listings, when they are not LICENSED or REGISTERED as professional engineers.

Even those who are titled or listed similarly as “engineer-in-training” MUST have, by law, satisfied the experience requirements for registration, successfully passed the Fundamentals of Engineering (FE) exam, and been enrolled by BPELS as an engineer-in-training BEFORE they can use that title publicly.

We ask that our engineering community not only adhere to these laws, but that you pass the word along regarding use of the titles of “Engineer” and “Engineer-in-training” publicly to ensure that ONLY professional registered individuals are using these titles. Thank you for your help in maintaining the law and the public trust regarding this important issue and pass the word along! [**READ MORE**](#)

KNIGHTLY NEWS

We have some great news to share regarding our Saint Martin's University Council of the Knights of Columbus!

Council 16361 received a traveling icon blessed by Pope Frances to recognize the Council undergoing a 33-day consecration to Saint Joseph. The icon is displayed in the Campus Ministry office in Old Main.



(L to R) Front Row: Hunter Askland, Tom Pursley, Andrew Thagard, Rhyan Ritter. Back Row: Dr. David Olwell, Mark Wood, Fr. Peter Tynan, Br. Edmund Ebbers, Michael Remer, Br. Mark Bonneville

In addition to the aforementioned honor, Michael Remer BSCE '22 was also honored by the Washington State Officers for his outstanding performance as Grand Knight from Jan 2020 to July 2021.



(L to R) Br. Mark Bonneville, Andrew Thagard, Dr. David Olwell, Hunter Askland, Michael Remer, Kim Washburn, Br. Edmund Ebbers, Sean Marsden, Tom Williams, Scott Hulse.

ENGINEERING HUMOR

The first computer can be traced back to the time of Adam and Eve.
It was an Apple with one byte of memory.



FACULTY NOTES – NOTED FACULTY



Dr. Floraliza Bornasal had a paper published recently in the Journal of Engineering Education titled “Tangibility of representations in engineering courses and the work place”. The paper was written by Dr. Bornasal, Matthew S. Barner, Shane Adam Brown, and David Linton. Congrats, Liza! [READ MORE](#)

Dr. Dintie Mahamah was informed that one of his papers has been selected to be included as a chapter in the book “Current Advances in Geography, Environment and Earth Sciences”. The paper is titled “State-of-the-Art in Managing Sludge Settling Problems for Some Treatment Plants in the United States” published in the American Journal of Biological and Environmental Statistics in 2015. Great work, Dintie!

Dr. Tapas Das served on the working group for and also presented a paper at the 11th International Conference on Sustainable Waste Management & Circular Economy and IPLA Global Forum 2021 December 1-4 at Jadavpur University, Kolkata, West Bengal, India, which is also his alma mater. [READ MORE](#) Dr. Das will also present a paper virtually at the AIChE (American Institute of Chemical Engineers) Annual Meeting, which runs in-person Nov. 7-11 and virtually Nov. 15-19 in Boston, MA. [READ MORE](#)

GET TO KNOW THE ENGINEERING ADVISORY BOARD



Paul Roush '98 graduated with his BSME from Saint Martin's College. His senior design project was a hovercraft! He turned the '97 senior design project into a go kart for our Saint Martin's Abbey monks!. He was also a founding member of the FIRST Robotics Competition Team 360 in 1999 and continues to work as a mentor, starting their 23rd season with this team. He was the ASME South Sound Section President and a District Trainer, and also volunteers with the SMU National Alumni Board, Paul has been an active member of our HIMSE Engineering Advisory Board for many years.

Paul started his career as a manufacturing engineer for Tally Printer Corp in automation and systems integration from 1998-2004. He then moved on to work for Puget Sound Naval Shipyard IMF as a Nuclear Engineers in freeze seals, nuclear portable metrology program, and special projects. Since 2015, he's continued with PSNS as a Combat Systems Alignment Engineer, supporting surface and submarine combat systems certification of combat systems alignment; optical, laser tracker, portable CMM (coordinate measuring machine) arms, large area laser scanners, point cloud analysis, and spatial analysis measurement equipment.

He was licensed as a Professional Engineer in 2003, and is an honorary member of Pi Tau Sigma. He has a certification as a Coordinate Metrology Society Level 1 Metrologist (2014) and CompTIA Security+ (2019). Paul Roush -- Thanks for your continued support of our HIMSE programs and students!

OUR ALUMNI AND WHAT THEY'RE UP TO

TYLER ADAMS- BSME '15 assisted with a project that won the Tom Guilfooy Memorial Craftsmanship award from the Sheet Metal Workers Association. In a recent email to **Dr. Isaac Jung**, Tyler noted that he's involved with “lots of field work, design and CAD laser time.” Congratulations, Tyler! [READ MORE](#)

IBRAHIM HAYSI- BSCE '20: Ibrahim is employed by Ibrize Al-Sharq Contracting & Maintenance Co. as a Civil Project Engineer, working on a Klybeck Vaccine Factory. He is designing, planning, and managing construction on the project and supervising a team of 18 workers. Congratulations, Ibrahim!

SHANE REYNOLDS- BSME '21: Shane is now working in research development at ECS Composites in Grants Pass, OR, currently involved with a NASA contract. Congratulations, Shane!

JORDAN KITCHEN-BSCS '19: Jordan is celebrating his one-year anniversary working as a Data Analyst for TrueBlue Inc in Tacoma. Congratulations, Jordan!

HOUSAM 'SAM' SALAMAH-BSCE '19, MEM '20, MSCE '21: Sam is now working for Hanson Professional Service, Inc. in Seattle as a Civil/Railway Designer. Congratulations, Sam!

NICK MAYFIELD-BSCE '19: Congratulations to Nick Mayfield for his 5-year anniversary with SCJ Alliance in Lacey as a Design Engineer.

CONTACT US

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 to engineering@stmartin.edu

CONDOLENCES

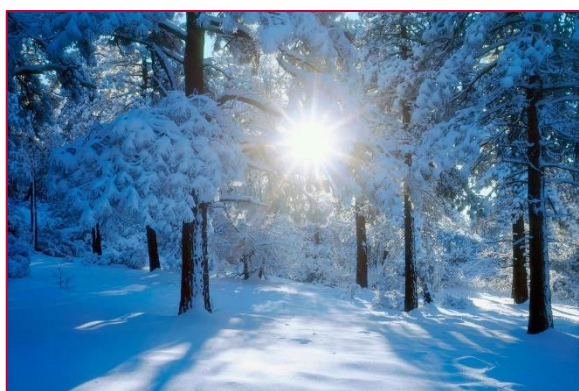
Jason Jeffrey Turner BSCE '07 passed away on Sept. 10, 2021 at 12:20 a.m. after a 37-day battle with COVID-19.

Jason served in the United States Coast Guard from 1995 to 2000 as a Gunner's Mate. He worked in armed security after leaving the Coast Guard. Though he had planned to go into law enforcement, he shifted to studying civil engineering like his dad. He attended Green River Community College, then St. Martin's University, where he graduated with a bachelor's degree in civil engineering in 2007.

Jason worked 10 years at the City of Tacoma. He had accepted a project manager position in Hillsborough County, Florida and was excited to start a new life in sunnier climes. He is survived by his wife Megan; his 11-year-old son Jeffrey; his parents, brother and sister. Rest in peace, Jason. [READ MORE](#)



CALENDAR AND EVENTS



- ❖ Dec 20-Jan 9 Winter Break (students/faculty)
- ❖ Dec 23-Jan 2 Winter Holidays (staff)
- ❖ Jan 8 Residence Halls Open
- ❖ Jan 10 Spring semester (Main/08/10) begins
- ❖ Jan 14 Deadline to add classes (Main/08/10)

- ❖ Jan 17 Martin Luther King Day (holiday)
- ❖ Jan 21 Deadline to drop classes (Main/08/10)
- ❖ Feb 21 Presidents Day (holiday)
- ❖ Mar 7 Mid-semester grades due
- ❖ Mar 7-11 Mid-semester Break
- ❖ Mar 21 Saint Benedict's Day (university holiday)
- ❖ Mar 24 Advising Day (no classes-Lacey campus)



DEAN'S CORNER

As I write this, Christmas is just around the corner. In this time of giving, I am grateful for the many blessings that the Hal and Inge Marcus School of Engineering community has received this year. The school is blessed with a wonderful faculty – the most collegial group of professors and instructors with whom I have ever worked! The school is blessed with a wonderful staff, as well, who daily use their initiative and creativity to improve the services we offer to students. We are blessed with hard-working, talented students, who really want to learn. And finally, we are blessed by having the community of alumni, who continue to do so much to support student, staff and faculty! So many blessings!

One of the extracurricular duties I have is advising two student clubs, the Veteran's Club and the Knights of Columbus. The Knights were led last year by **Michael Remer '22**, and he did a wonderful job that earned the council multiple recognitions. Hence the photos earlier in the newsletter. HIMSE supports eight engineering clubs as well – and all these clubs enrich student life.

We have formed a small faculty taskforce to review and revamp our engineering admissions activities. We are starting to feel real pressure from the UW-Tacoma ME and now CE programs, who are competing with us on cost and branding. We think that our distinctive value proposition of small classes, values-based education, beautiful campus and facilities, and supportive community will continue to resonate with prospective students and their families. We are working to improve the way we inform prospective students of the advantages of a Saint Martin's STEM education. As always, the support of alumni and friends is an important part of that story.

Karen joins me in wishing you a blessed Christmas Season and a Happy New Year!

Best wishes,

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



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