



Engineering Technology News

Texas State University

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Spring 2018

CSM Program Receives Re-Accreditation from American Council of Construction Education (ACCE)



Dr. Gary Winek, Construction Science and Management Program Coordinator receives congratulations on re-accreditation at the ACCE Mid-Year Conference

The Construction Science and Management Program was originally accredited through the American Council for Construction Education (ACCE) in the Spring of 2013, when the program consisted of one hundred ninety seven (197) majors and five (5) faculty members.

The program received a five (5) year accreditation, at that time, which was the maximum for an initial accreditation.

In June of 2017, the CSM program had grown to five hundred thirty nine (539) majors and ten (10) faculty members, when it submitted its self-evaluation study for re-accreditation. A site visit was then scheduled and completed October 14-17, 2017 when five (5) ACCE Evaluators thoroughly reviewed the CSM program. In their final report, they noted six (6) program strengths which are: 1) Extremely active Construction Student Association; 2) CSM Faculty is dedicated, passionate and fully engaged; 3) The Construction Advisory Board supports the program by offering internships, guests lectures, site tours, capstone projects course leadership and financial support; 4) Careers Services offers a first rate placement service; 5) The CSM program receives excellent support services from Admissions and the Registrar's Office; 6) The Business

Administration Minor adds value to the degree. The ACCE Visiting Team noted four (4) weaknesses: 1) The method by which the "Student Learning Outcomes" (SLOs) are measured, need to be included in the course syllabi; 2) The results from the assessment based on the SLO's need to be included in the Program's Quality Improvement Plan; 3) Inadequate computer lab access, because the labs are heavily used to teach classes, allowing little open lab time for students; and 4) Include additional information on the Department's website.

The program was given the final accreditation status on February 23, 2018, when it was announced at the ACCE Mid-year Conference. The CSM Program received the maximum six (6) year

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Texas State University is a tobacco-free campus.

This information is available in alternate format from the Office of Disability Services.

Faculty News - Condolenses



A tribute to retired faculty member Assistant Professor Emeritus John Yarchuska

Texas Teachers College in San Marcos in 1950 where John and Kathy decided to build their life together.

John received his Bachelor of Science in Industrial Arts in 1952 followed by his Master of Education in 1954 from Southwest Texas Teachers College. While in school, he worked in the College Printing Department and learned the early ways of printing which included setting individual type characters by hand. As printing technology advanced, John learned and operated automated typesetting machines.

In 1954, John was appointed Director of Printing Services at the University Press. He also taught Printing (Graphic Arts) and Photography. The University Press printed all the needs for the campus from calling cards, programs, and pamphlets to course catalogs. John served the University for 39 years until retirement in 1992. He was known to his friends, students and colleagues as “Mr. Y”. In 1995, the University awarded him the Title of Assistant Professor Emeritus.

John’s passion outside of teaching was gardening, flowers, and trees. He was a prolific gardener and every year planted a variety of vegetables. He would set up a table in the garage and sell vegetables on an “honor” system. He set up a scale, price list, and receipt book on the table for customers to weigh the vegetables and leave the money with a receipt in a cigar box. When asked what he wanted for his birthday, father’s day or Christmas, it was always a fruit tree of some kind. John’s produce was well known in the San Marcos community for its home grown quality and freshness. He would always say, “it’s soil, not dirt. Our Lord gave us soil to plant things. Dirt comes out of a vacuum and I doubt that you can grow veggies or flowers in dirt”.

Besides his gardening, John loved the outdoors. He was an avid storyteller and could brighten one’s day with his hunting and fishing experiences. He also enjoyed dancing and would try to go twice a week

at Martinez Social Club. John could tear up the dance floor country western dancing, but also danced to other types of music such as the polka, waltz, and jitterbug.

John loved animals and raised goats, turkeys, cows, hogs, chickens, doves, rabbits and had numerous pet dogs during his life. His miniature dachshund, Jessica, was his best friend until she died in 2013. John was lovingly known as “Grandpa Chicken” to his grandchildren.

John was preceded in death by his wife of 50 years, Katherine; Parents, John Paul and Helen Margaret Jarchuska; Sisters, Mary Hamilton, Terry Kelly, and Irene Popescu; Grandson, Chase Andrew Reed. John is survived by daughters, Sandra Reed and husband Martin of New Braunfels, and Karen Doebbler and husband John of San Antonio. He is also survived by grandchildren: Vickye Kreis and husband Kenneth, Shanna Dudley and husband Ian, Kelli Reed, Brett Reed and wife Sarah, John Doebbler, Jr. and wife Tara, and Dianna McCoy and husband Matthew; great grandchildren: Jade Reed-Kreis, Bailey Kreis, Reed Dudley, Cameron Dudley, Mallory Kreis, Landon Dudley, Kinnley Reed, Ayden Reed, Chase Reed, Addison Reed, and John Doebbler III; Great Great Grandson: Dawson Kreis; Sisters: Josephine Worobel and husband Walter of Waco, and Helen Engel of Trumbull, CT and numerous nieces and nephews.

Visitation was held at Penninton Funeral Home, San Marcos, Texas on Friday, January 19, 2018, Funeral services were held at First Presbyterian Church of San Marcos on Saturday, January 20, 2018. Graveside services followed at Memorial Lawn Memorial Park in Martindale, Texas. The family respectfully requests, in lieu of flowers, that donations be made to The Leukemia & Lymphoma Society or The American Cancer Society.

It is with great sadness that the Department of Engineering Technology announce the passing of a very special and valued retired faculty member. John Yarchuska or “Mr. Y” served the department and the university for so many years, as both a faculty member and staff employee and it is important to honor this very special colleague.

John Andrew Yarchuska, 90, of San Marcos, passed away at New Haven Assisted Living Facility of Schertz on January 14, 2018, after a long struggle with declining health. John was born in Bridgeport, CT on July 17, 1927 to John and Helen Jarchuska. He was the only boy of six children. John loved life, nature and outdoors, telling stories, hunting, fishing, gardening, dancing, and watching westerns.

John left home when he was 17 and was proud to serve his country by enlisting in the United States Navy from 1945 to 1949. He was a World War II Veteran and served on the USS Guadalupe as a Fireman 1st Class. While stationed on the USS Guadalupe, the ship delivered oil to the Naval Islands of Guam, Saipan, Okinawa and fueled the ships at sea in the Pacific.

John met his wife Katherine (Kathy) when she was working at the Pentagon in Washington DC. They married in La Plata, MD on October 4, 1947. After his discharge from the Navy in 1949, they moved to his wife’s hometown of Uvalde, Texas, where he enrolled in Southwest Texas Junior College. After completing his freshman year, he transferred to Southwest

Congratulations



Robert Habingreither

Habingreither honored with International Education Award by SME

Excerpts from Jack McClellan's article
Office of Media Relations
May 2, 2017

Texas State University professor Robert Habingreither has been honored with the International Education Award by the Society of Manufacturing Engineering (SME).

The award was presented April 30, 2017 during the organization's annual gala in Chicago. Habingreither received the award in recognition of his 38 years of dedicated service to higher education, the profession of manufacturing engineering and engineering in general, as well as the education of countless young professional manufacturing engineers throughout his distinguished career.

Habingreither has taught at Texas State since 1978 and played a major role in bringing engineering education to campus. He helped establish the manufacturing engineering program--the university's first engineering program--even writing and designing the first curriculum in 1999. Throughout his career, the emphasis has been on

expanding engineering education.

"I'm a teacher," Habingreither said. "I have done my share of publications and written my share of grants, but I got into the university business because I wanted to teach. It makes me feel like I contributed something to the welfare of people." Habingreither said he sees engineering education as vital for the growth of the university and Texas.

"Engineering is what supports the economy of this state," Habingreither said. "My goal has always been to create wealth for the state of Texas, and my way of doing that is to promote engineering and technical programs and create a workforce that is adequately prepared." Habingreither learned this passion for creation from his father. "My dad was a machinist and he taught me a lot about making parts," he said. "As a machinist, you're in a powerful place. You make the things you need."

Habingreither earned bachelor's and master's degrees in industrial technology from Montclair University in 1971 and his doctorate from West Virginia University in 1978. After teaching industrial engineering for two years at West Virginia University, Habingreither accepted a position at Southwest Texas

State University teaching manufacturing systems and power systems. He became certified through SME in 1988 with a material removal specialization. "Dr. H," as he is known, started SME's Texas State University-San Marcos S147 student chapter in 1984. Habingreither has served as associate dean for academic affairs in the College of Science and Engineering since 2006 and also served as interim dean in 2008 and 2015. He served as chair of the Department of Engineering Technology from 1984 until 2006.

Habingreither's research interests are castings design, metallurgy, alloy analysis and various spectrographic techniques. He recently received a patent, along with his team, for a ceramic coating for the barrel of machine guns, to prevent the barrels from overheating.

"I like the students," he said. "I think that's an important piece of being a good instructor." Along with awards for teaching, publications, grantsmanship and community service, he served as mayor of San Marcos, Texas, from 2002 until 2004. Habingreither has taught a broad spectrum of technical courses and received the Teaching Award of Honor in Fall 2008.

Alumni Achievement Spotlight



EUNICE SOLIS



RESEARCH TECHNOLOGIST
SIGMA DIVISION, Σ

Eunice Solis, an Engineering Technology alumna, is currently working as a Research Technologist for Los Alamos National Laboratory in the Sigma Manufacturing Science Division. This

division is focused on materials science and engineering, specifically metallurgical processes. Eunice is part of the Foundry & Solidification Science Team which creates both classified and unclassified prototypes using methods such as vacuum induction melting, vacuum arc re-melting, and plasma arc melting. The parts are often made of radioactive materials such as uranium and thorium, though non-radioactive materials are used as well. In her own words, "The capabilities of the Sigma Division as a whole are impressive and prove to be essential to the mission

of the lab." Eunice graduated from Texas State University in Spring 2017. In addition to being a SPARK Scholar and the recipient of an H-LSAMP scholarship, she is a former president of the University chapters of both the American Society of Mechanical Engineers (ASME) and Materials Advantage. She was also an Undergraduate Research Assistant for the Nano and Microsystems Group where she worked with Ph.D. Candidate Devanda Lek and her mentor Dr. Byoung-Hee You.

Special Events

Construction and Concrete Industry Job Fairs

The Construction and Concrete Industry Job Fair was held from 1-4 p.m. on Thursday, February 15, 2018. The Spring 2018 Job Fair had 55 companies represented.

Prior to the start of the fair, employers received lunch and a brief update of the two programs by Construction Science and Management Director Dr. Gary Winek and Concrete Industry Management Director Dr. W. James Wilde. The two student organizations including American Concrete Institute (ACI) Student Chapter Officers and Construction Student Association (CSA) made brief presentations.

The new CIM Director Dr. W. James Wilde gave a brief update about the Concrete Industry Management program and introduced the ACI Student Chapter Officers and their presentation. A brief presentation was given by Dr. Chris Smith, and CSA Advisor Dr. Vivek Sharma introduced the 2017-2018 CSA Officers and their presentation. Thank you to Texas State Alums that continue to return to recruit our students.



Dr. Gary Winek, Construction Science and Management Director



Dr. Chris Smith Construction Science and Management Faculty



Dr. W. James Wilde, Concrete Industry Management Director



American Concrete Institute (ACI) Officers



Dr. Vivek Sharma Advisor to the Construction Student Association with current CSA Officers



CSM Program Updates

AIC-AC Certification Exam

The Construction Science and Management Program is now requiring all students to take the American Institute of Constructors (AIC), Associate Constructors (AC) Exam in the Senior Capstone course. The certification exam is 300 questions long and will be given on Saturday, April 7, 2018. To pass this eight (8) hour test, students must get 210/300 questions correct for a 70% overall average. Currently, the exam score will count for 10% of the student's grade in the Capstone course, however in the future it will become mandatory for the students to pass the AC-Exam to graduate from the CSM Program.

During the Fall 2017 semester, seventeen (17) students volunteered to take the test, with 14 passing and two students missing passing by only one (1) point. The student with the highest score, was in the 97th percentile. That means that only three (3) percent of the students taking the exam nationally did better than this student. This has given the program director confidence, that the CSM Program is meeting national standards and that a majority of our students should be able to pass the exam on their first try. Also, the exam is an external measurement that can be used to validate the program's effectiveness in teaching nationally recognized topics, that have been determined to be of importance to the Construction Industry.

Residential-Professor of Practice

The Construction Science and Management Program is currently seeking applicants for their currently advertised, "Professor of Practice", with a Residential emphasis. The successful candidate will need to have a Bachelor's Degree in Construction Management (CM), or a closely related field and a Master's Degree in CM, Architecture, Civil Engineering or Business. Along with the appropriate Degrees, the candidate needs a minimum of five (5) years of relevant construction experience to be considered for the rank of Assistant Professor, ten (10) years' experience for the rank of Associate Professor and fifteen (15) years' experience for the rank of Professor. The initial appointment for this non-tenure track position is five (5) years, which can be renewed.

The purpose of a Professor of Practice position is to bring a professional with relevant work experience to the program to teach practical courses such as estimating, contracts, scheduling and the residential course, for example.

The candidate is expected to establish a working relationship with the residential home building industry and associated professional organization. Also, the candidate will interact with the students interested in the home building industry, along with coaching students to compete in the NAHB National Competition. If all goes as planned, we are hopeful to have a person hired for the Fall 2018 Semester.

Master's Degree in Construction Management

The Construction Science and Management (CSM) and Concrete Industry Management (CIM) faculty have included the development of an online Master's Degree in Construction Management in their 2017-2023 strategic plan. This degree will serve both CSM and CIM students interested in pursuing a CM Master's Degree along with Construction Professionals who desire an advanced degree. The degree will offer two tracks. The first track will be 30 hours and designed especially for the working professionals. The second option will be 36 hours and include a six (6) hour thesis option, for students interested in writing a thesis and/or pursuing a Ph.D. later in life. Since working professional often do not have the time to drive to campus to take evening classes or are located too far from campus to make commuting impractical, the entire Master's will be offered online. Currently, we are documenting the need for the Degree as the first step in a lengthy process to get the Master's Program approved. If all goes well, we hope to offer the Degree before Fall of 2022.

CSM Graduation Rates Continue to Rise



CSM majors at May 2017 Commencement Ceremonies

The Construction Science and Management Program continues to increase graduation rates. The white hardhats are hard to miss during the commencement ceremonies.



CSM majors at December 2017 Commencement with retiring CSM Faculty member Dr. Cassandra Hager.

Industry Outreach



Steel Industry Day Banner



Left to right: Ajit D'Brass, Kendall Benavides, Dr. Dika Handayani, and Sidney Harris



Left to right: Cole Korte, Bradley Glaser, Madeleine Jennings, and Scott Peabody at the AFS Choctaw Casino Meeting.

Steel Industry Day

Sponsored by AIST (Association for Iron & Steel Technology), Department of Engineering Technology at Texas State University hosted the third annual Steel Industry Day on October 31, 2017. The goal of this event is to increase the number of young engineering and technical professionals that choose steel industry related careers. The event started with Welcome Reception and Dinner at Saltgrass Steak House, attended by Dr. Dika Handayani, Dr. Andy Batey, Carla Batey, and ten students from Texas State University, Paola Trevino and Billy Korzekwa from Commercial Metals Company (CMC), and Alexis Rose from JSW Steel. In addition to great dinner, the students had a pleasure to talk with industry representatives in a casual setting.



During the Steel Industry Day, CMC and JSW Steel provided the students with information about steel industry and also the internships/full-time position opportunities in the field. Furthermore, the AFS (American Foundry Society) student officers and student volunteers distributed more than 200 flyers containing information about AIST, Material Advantage, AFS, and FEF (Foundry Educational Foundation). About 250 BBQ Lunch was provided for students who stopped by and learned about steel industry.

The Steel Industry Day ended with the information session. Pizza was served in this afternoon session. Rolando Davila and Priscilla Silva gave a presentation about CMC, steel industry, and AIST. CMC also sponsored two raffle prizes: a Beats wireless earphone, won by Trevor Jones, and a \$50 Pluckers gift card, won by Sagar Navle.



Alexis Rose from JSW Steel



The raffle winners! Left to right: Rolando Davila, Sagar Navle, Trevor Jones, and Priscilla Silva

AFS Choctaw Casino Meeting

On October, 2017, Madeleine Jennings, Bradley Glaser, Scott Peabody, Cole Korte, and Dr. Dika Handayani represented the AFS Texas State University Student Chapter to attend the AFS Texas Chapter Meeting in Choctaw, OK. They had an excellent opportunity to mix and mingle with foundry representatives and to learn about developments in the foundry industry. The technical sessions covered the constant monitoring and preventive maintenance program at EJ Foundry, presented by Daniel Sherbert.



Tour of Engineering Technology for 5th Grade Students

On November 2, 2017, Department of Engineering Technology hosted nineteen

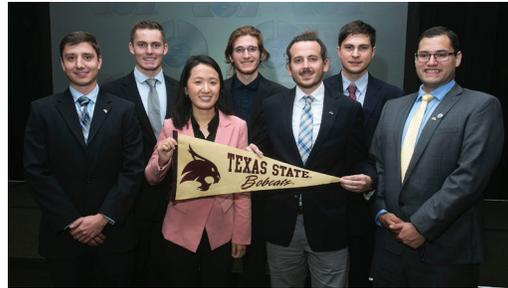
5th grade students along with parents and teachers from New Braunfels Christian Academy. The tour was a fantastic event to expose young curious minds to the engineering world. On this tour, they were able to visit the 3D Printing, CNC Machining, Concrete laboratories and the foundry at Texas State University. During the foundry tour, these students participated in the lost-foam casting process with Dr. Dika Handayani. With the help of the volunteers Rico Bendimez and Jared Barber, these students designed their own castings in foam and watched the aluminum pour. The parent volunteers and the students had a great time gaining firsthand experience with the foundry, PPE, and casting processes involved in making their everyday items.

Industry Outreach

CMC Tour

Sponsored by AIST (Association for Iron & Steel Technology), a group of engineering and engineering tech students from Texas State took part in a tour to Commercial Metals Company (CMC) Seguin facility on November 9, 2017. CMC Seguin is a recycling facility that takes scrap metal and converts it into rebar for construction. The facility is capable of processing 2,000 tons of steel per day, and is a full scrap-to-ship operation.

The students experienced a behind the scenes look at a modern steel mill. A brief presentation and Q&A at each of the operational control centers was giving by the section's manager. The CMC management was extremely reverent and proud of the work they do and happy to share their knowledge and expertise. The tour consisted of viewing the massive electric arc furnace, the 4 tier continuous casting operations, the rolling mill, shearing station, and lastly, the material testing lab. After the tour, the students were treated to a prepared lunch and an extremely informative Q&A session with the plant manager. He spoke of the growth in the industry, the high quality of Texas State graduates, and stressed that a diverse and multidisciplinary team is critical to running the massive facility.



Left to right: Bradley Glaser, Luke Jaroszewski, Dr. Dika Handayani, Daniel Bellian, Scott Peabody, Igor Shabaturova and Rico Bendimez.

FEF College Industry Conference (CIC)

FEF (Foundry Educational Foundation) held their annual College Industry Conference (CIC) on November 16-18, 2017. CIC is the largest metal casting recruiting event of the year. This year, 118 student delegates representing 27 FEF certified and affiliated schools, along with more than 200 industry leaders attended this event. Nowhere else can a student pursuing a career in metal casting be exposed to and interact face-to-face with such a wide variety of industry professionals. Six students from Texas State had a pleasure to be invited to this event.

At the CIC, directly in the middle of the bold and energetic city of Chicago, IL, students are painted a picture of what their future career might be and feel as each handshake and conversation is moving them closer to success. After personally interacting with over twenty company representatives at a job fair event, the students were invited to several one-on-one interviews. Later that night, every student was taken out to a high-end restaurant by a company that they had made a good impression on at the job fair and treated to dinner among industry professionals.

The second day began with three keynote speakers: Rachel Abrahams (Senior Research Engineer at U.S. Air Force), Steve Sikorski (President of MAGMA Foundry Technologies), and Wil Tinker (President of Tinker Omega Manufacturing) shared their journey to metalcasting industry. The event continued with scholarships and awards ceremony to individuals with an outstanding dedication to metal casting. Over \$57,000 scholarships were given out at the CIC's this year.

As a result of this event, Daniel Bellian has been offered a summer internship position at General Motors. Daniel said, "Without FEF and the College Industry Conference, I would not have this life-changing opportunity, and I am extremely grateful for the generosity and commitment this organization shows to students pursuing a career in metal casting and related fields." Scott Peabody and Bradley Glaser also headed for a career in metalcasting after their graduation in December 2017. Scott accepted a position as a Molding Supervisor at American Axle and Manufacturing, and Bradley started in the Grad-in-Development Program at General Motors. Igor Shabaturova, Rico Bendimez, and Luke Jaroszewski will be graduating in Spring/Summer 2018 and have been going through interview process with several foundries.



Left to Right: Andy Long (EJ), Bradley Glaser, Dr. Dika Handayani, Trevor Jones, and Igor Shabaturova.

EJ Foundry Tour

On December 4, 2017, Dr. Dika Handayani along with three AFS members: Bradley Peabody, Igor Shabaturova, and Trevor Jones, had the pleasure to visit Eastern Jordan (EJ) foundry. Being able to see the inside of the production was a great experience for everyone. Their facility was extremely clean and had a very efficient process. Having the opportunity to tour their facility was amazing and it opened students' eyes to understanding the true vision of the foundry industry. The coolest part about the tour was seeing the patterns they used for the manufacturing of manhole covers that are all over Texas State's campus. Next time you walk over one, look down and you will see Eastern Jordan!

Industry Outreach



Left to right: Ajit D'Brass, Ryan Goodrum, Daniel Bellian, Alec Adair, Trevor Jones (Texas State University), and Brett Morehead (AFS Texas Chapter Vice Chairman)

AFS Houston Race Park Meeting

On February 2, 2018, six officers from the Texas State American Foundry Society attended the AFS Texas Chapter meeting held at the Sam Houston racetrack in Houston, TX. The officers who attended were Trevor Jones, Daniel Bellian, Ajit D'Brass, Alec Adair, Ryan Goodrum, Matt Candelas, and Faculty Sponsor Dr. Dika Handayani.

At the meeting, the officers had the opportunity to meet with dozens of AFS members from the metalcasting industry. The officers were treated to a very nice dinner and a brief presentation by Mico Curreri from Ex One, where he discussed their 3D printing technology applied to the metalcasting industry. Afterwards the AFS members watched horse racing and socialized with other members in the Texas chapter. The Texas State officers were given the opportunity to network with several potential employees who were very eager to meet with them, in addition to a wonderful dinner and a fun evening courtesy of the American Foundry Society.



Open Foundry

On February 16, 2018, the Texas State University AFS student chapter hosted an Open Foundry Day. Being the first open foundry of the semester, there was a great turnout. AFS Officers Trevor Jones, Bryson Caldwell, and Matt Candelas attended the event and helped assist the others who were there to participate and learn about the different metalcasting processes. The guests were free to make castings using green sand, air set, and lost-foam castings. Some groups moved between the three different stations and were able to make multiple different molds while others took more time to work on a single casting. At the end of the pour, several great pieces were created, and everyone had a fun time and was interested in coming back for the next open foundry day hosted by the AFS.



CICIRO 2017

Dr. In-Hyounk Song was invited as a plenary speaker at 2017 Changwon International Conference on Intelligent Robot and Convergence Industry (CICIRO 2017), held in Gyeongnam, Korea from November 30 until December 1, 2017.

The goal of this conference was to discuss novel findings and new methods, reacquaint with colleagues, and broaden knowledge from academicians and professionals. This conference covered a wide range of fields from robotics and intelligent control technology to convergence industry. Especially, many research papers were presented on artificial intelligence, advanced mechatronics, smart factories, as well as technical fields such as intelligent robots, IT and NT, which are the core fields of the fourth industrial revolution. During this conference, Dr. Song provided a lecture on Vertically Movable Gate Field Effect Transistor for Low Frequency Vibration Monitoring System.

Research/Conferences

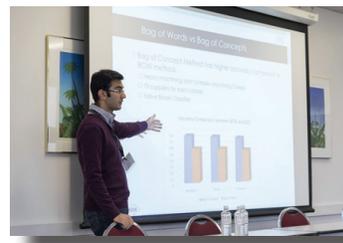


Left to Right: Cameron Turner (CIE conference chair), Farhad Ameri, Ramin Sabbagh, and Ian Grosse (CIE conference chair)

ASME CIE Conference Best Paper Award

Ramin Sabbagh and Farhad Ameri jointly received the best paper award for their paper titled “A Thesaurus-guided Text Analytics Technique for Capability-based Classification of Manufacturing Suppliers” that was presented at ASME CIE conference in Cleveland, OH in August 2017. ASME CIE is the flagship conference in Systems Engineering and Design and only high-quality papers are accepted for publication and presentation. This paper was invited for publication in the ASME Journal of Computing and Information Science in Engineering.

Top Paper Award at the 9th International Research Conference



The Graduate College at Texas State University hosted the Ninth Annual International Research Conference for Graduate Students on November 7–8, 2017. In the Research

Contest held in conjunction with the conference, Ramin Sabbagh, master’s student in Technology Management, received the Top Paper Award in the master’s category. Ramin’s research is related to using Natural Language Processing (NLP) and Text Analytics techniques for analyzing the unstructured manufacturing data available on the Internet. Ramin is currently a member of the Engineering Informatics Research Group (INFONEER) working under the supervision of Dr. Ameri.



Transportation Research Board 97th Annual Meeting

Mr. Mithil Mazumder, Dr. Soon-Jae Lee’s doctoral student, presented a paper at Transportation Research Board 97th Annual Meeting in Washington, D.C. (January 7-11, 2018). The paper is titled “Comparison of field performance of crack treatment methods in asphalt pavement: crack filling versus crack sealing.”

Dr. Kimberly Talley’s Grant News!

As part of a multi-university team, Dr. Kimberly Talley was recently awarded a five-year, \$1.8 million-dollar National Science Foundation grant titled, “Enhancing Visualization Skills and Conceptual Understanding Using a Drawing-Recognition Tutoring System for Engineering Students”.

For this collaboration, Dr. Talley will be integrating an online drawing recognition tutoring system into homework assignments for Structural Analysis. The drawing recognition tutoring system, Mechanix, has been developed as a software application by Texas A&M University and an online version is being created in the first year of the grant. Texas State’s involvement is for four years and \$184,000 of the total grant, starting in Fall 2018. Dr. Talley is excited about the possibility of this software to help coach students through the drawing and use of free body diagrams, included for truss analysis.

Student Organization News



American Concrete Institute ACI Student Chapter

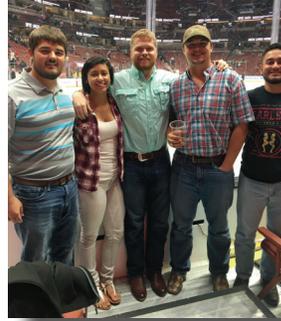
2017-2018 OFFICERS

President: Mason Davis
Vice-President: Daniel Arkin
Treasurer: Michael Graves
Secretary: Savanna Sitz

Faculty Advisor – Dr. Fred Aguayo



2017-2018 ACI Students (L to R: Michael Graves, Kady Williams, Mason Davis, Daniel Arkin, Jeremiah Crespo, Raul Gonzalez, and Savannah Sitz)



Texas State CIM students attend the ACI National Convention – Social Night out and fun at the seaside (Anaheim, California)



Senior design presentations

Fall 2017 was Dr. Wilde's first time teaching the CIM 4398 – Capstone course for seniors. The students presented their final projects to a group of patrons board members, other students, and some family members. By all accounts the seniors did a great job, and the professionals in attendance were impressed by their knowledge of the technical and business aspects of the industry.



Field trips - WJE September 2017

Dr. Yoo Jae Kim took his senior lab (CIM 4310) class on what is becoming an annual field trip to the offices of Wiss, Janney, Elstner Associates, Inc., laboratory in Cedar Park. The lab is a great educational experience for the students to see a professional concrete lab in operation, and to see the different types of scientists, engineers, and technicians employed in the lab. concrete and construction companies participating.

ACI National Convention – Egg Protection Device Student Competition



Seven students attended the ACI Semiannual convention in Anaheim, California – at Disneyland! The students participated in the ACI Egg

Protection Device competition. They placed 23rd among 38 schools from around the world.

Student Organization News



2017/2018 OFFICERS

Advisor: Dr. Dika Handayani

President: Trevor Jones
Vice President: Ryan Goodrum
Secretary: Matt Candelas
Rico Bendimez
Luke Jaroszewski
Treasurer: Alec Adair
Savaughn Anderson
Public Relations: Daniel Bellian
Corbin Womack
Fundraising Coord: Ajit D'Brass
Bryson Caldwell
Igor Shabatura

American Foundry Society (AFS) is a regional organization involving 800 business members and 7,300 individual members. There are 44 regional chapters, as well as 38 student chapters at colleges and universities. The organization has a three-part mission of advocacy, education and innovation to those interested and involved in all foundry-related careers, including students. Student membership: \$20/year. Social Media: <http://www.afsinc.org/> and Facebook: American Foundry Society at Texas State University.

FEF (Foundry Educational Foundation) strengthens the metal casting industry by supporting unique partnerships among students, educators and industry, helping today's students become tomorrow's leaders. Texas State University is one of twenty FEF Certified Schools. Student membership: FREE!
<http://www.fefinc.org/>

AFS/ASME Joint Meeting

On November 9, 2017, Mr. George Hartmann from the Texas Board of Professional Engineers was invited by the

AFS Texas State University Student Chapter and the American Society of Mechanical Engineers (ASME) to give a presentation on campus. His presentation included the application and licensing process of having a professional license in engineering.

Mr. Hartman explained the requirements needed in order to take the Fundamentals of Engineering (FE), and the Principles and Practice of Engineering (PE) exam. He also explained the benefits that are awarded for passing the FE which roughly translates into needing about four years of experience as an Engineer-in-Training (EIT) to take the PE. The benefits of having a professional engineering license creates an enormous prestige that is highly regarded in the field of engineering.

The presentation concluded where Bryson Caldwell won a gift card to Pluckers, sponsored by Commercial Metals Company (CMC) and while the audience members asked a series of questions that could not have been more thoroughly addressed without someone who has firsthand experience working for the Board of Professional Engineers in Austin.



*Bryson Caldwell (Raffle Winner)
with Mr. George Hartman*

Upcoming Events

- Feb 23 AFS Student Chapter Social Event
- Mar 8 Metalcasting Advisory Board Meeting
- Mar 20 AFS/SME Student Chapter Meeting
(Guest Speaker: Mico Curreri - Ex One)
- Mar 22 CMC Tour
(Sign-up with Dr. Dika Handayani – RFM 2220)
- Apr 3-5 AFS Metalcasting Congress
- Apr 17 AFS Student Chapter Meeting
- Apr 27 AFS Corsicana Country Club Meeting

Student Organization News



Mr. Hartmann discussing with students the process and benefits of a professional license



2016-2017 OFFICERS

President: Devanda Lek
Vice-President: Joseph Miller
Secretary: Clare Collins
Treasurer: Goldi Makhija
Faculty Advisor: Dr. Byoung Hee You

ASME Student Chapter News

The American Society of Mechanical Engineers (ASME) is the principal society for professionals and scholars who specialize in mechanical engineering. ASME is a network used to advance engineering by promoting education and training, research publications, and establishment of codes and standards for engineering design. As a student chapter, ASME at Texas State is driven to allow members to network with other students and professionals from multiple Universities and industries.

On November 9th, 2017, ASME and AFS co-hosted Mr. George Hartmann, P.E. a Licensing Project Manager from the Texas Board of Professional Engineers. Mr. Hartmann's goals was to encourage engineering technology students to pursue a professional license in the State of Texas. Topics included the history of licensing in Texas, the application process and timeline, and the benefits. Mr. Hartmann discussed his experiences as a Professional Engineer, and what an applicant can expect during the processing periods.



Dr. You and Devanda at IMECE 2017 held in Tampa, Florida

2017 International Mechanical Engineering Congress and Exposition (IMECE)

At IMECE Dr. You served as a topic-organizer for Track 13-4 Design and Fabrication, Analysis, Processes, and Technology for Micro and Nano Devices and Systems, and as a Member-at-Large for the MEMS division. As

He was allowed to discuss his results and receive vital feedback from collaborators and the audience. Dr. You and Devanda are planning to attend the 2018 iteration of IMECE which will be held in Pittsburgh, PA. Dr. You will continue to work as a topic-organizer and will assume responsibilities as Co-Chair for the MEMS division, and Devanda will conduct a technical presentation.

Associate Professor Dr. Byoung Hee You, and Ph.D. Candidate Mr. Devanda Lek attended the 2017 International Mechanical Engineering Congress and Exposition (IMECE) in Tampa, Florida. IMECE is one of the largest mechanical engineering conference held annually, drawing professionals and scholars from around the United States and abroad. Attendees were able to network with industrial representatives, and present their research in over fifteen different technical concentrations.

a topic-organizer, he was responsible for scheduling and proctoring technical presentations. As a member-at-large, Dr. You assisted in administering the agenda for MEMS division to plan upcoming events. Devanda, a graduate student under Dr. You, presented their research work on the Micro Mechanical Punching of Through-Holes for Microfluidic Interconnection.



Devanda discussing micro mechanical punching of through-holes

Student Organization News

Construction Student Association News



2017-2018 OFFICERS

Faculty Advisor: Mr. Vivek Sharma

President: Riley Oldmixon

Vice President: Steven Haley

Treasurer: Alejandra Ibarra

Secretary: Jacob Pruski

ABC Ambassador: Sam Haynie

AGC Ambassador: Garrett Whitaker

NAHB Ambassador: Michael Gonzales

Boko's Development: Daniel Hesse

IT/Social Media Coordinator: Lauren Odle

Community Outreach: Hector Loreda

Special Events: Stephen Baird

CSA has been the number one ranked national ABC student chapter of the year since 2016! CSA's main mission is to provide Texas State students valuable face time with industry professionals through info sessions, job site tours, national competitions, community service projects, and its annual golf tournament. Info sessions and jobsite tours are a chance for companies to directly tell students about their company, or they can even host a small workshop. Info sessions and job site tours create an opportunity for students and companies to get to know each other, spend time on active construction sites, and give students the chance to see how all their hard work will pay off. The goal is to host at least 6 info sessions and job site tours a semester. This semester, 11 info sessions and 8 job site tours have already been scheduled with more still in the works!

Bands for Building is the primary fundraiser for CSA's Boko's Builders hosted by Tantra Coffee house here in San Marcos. There is a raffle, local live music, food and drinks. A portion of all sales for the night are donated by Tantra to the project.



Boko's Builders is a joint effort between student run organizations in the Interior Design program and the CSA.

This project benefits individuals that have been instrumental in locally assisting those less fortunate or have given their time, money and/or service above and beyond. This year's project is for a minister that is donating his childhood home that will provide a place for recently released offenders to acclimate back into society and get back on their feet.

Additional Community Outreach efforts this semester include connecting with the Wimberley Valley Habitat for Humanity with the hope of forming a long-term relationship that helps them achieve their goals and allows our students to expand their knowledge of



construction. Going out into the field and participating in these builds creates a great opportunity for students to learn about how a structure comes together, while allowing them time to learn how to use power tools, and give back to the community all at the same time. In late January, WVHH's 20th build kicked off and CSA helped to frame walls and has continued to assist every week they are not hosting a ramp build. CSA hopes this relationship continues to grow each year and are excited to see what the future holds. Another way that CSA connects with the local community



is through its close relationship with the Texas Ramp Project. These projects provide those with mobility issues a way to easily get in and out of their houses. Without easy access to their houses some of these individuals and family are at serious risk of falling and hurting themselves on a daily basis. CSA's goal is to complete

3-4 of these projects a semester and currently have completed 38 ramps in the last 5 years.

On April 21, 2018 the CSA will be hosting the 13th Annual Golf Tournament. This is the largest fundraiser of the year and makes all of what we do possible. The tournament consist of 25 teams comprised of industry professionals from all different types of construction fields and our students. The event provides those involved with chances to win prizes, network, kick back and engage in some friendly competitions and at the end enjoy some amazing food provided by a local 5-star catering service out of Dripping Springs. If you are interested please reach out soon because spots are filling up fast!

Student Competitions

Construction Students Compete at ASC Region V Competition



Heavy Civil Team Wins Second Place

Texas State had one of the best overall showings at the TEXO-ASC Student Competition in the history of our program this year. On February 17-19, 2018 Texas State competed in the Associated Schools of Construction (ASC) Region V Competition, placing 2nd in Heavy Civil, 3rd in Design Build, and 4th in Commercial. As a whole, the students endured an extremely long and stressful weekend by working 16+ hours each day to get their projects ready to present to the judges on Monday. In Region 5 there are 15 other schools that compete against Texas State, and as a school we are proud to say we came in 2nd overall.

The Heavy Civil competition team was coached by Mr. Cade Humphries and consisted of members: Jacob Pierce (Team Captain), Louis Myers, Kaleb Friend, Joseph Post, Alejandra Ibarra, Jordan Torre and alternates: Miriam Hinojosa and Jennifer Garcia. The team competed against: 1st place Texas Tech University, 3rd place University of Arkansas Little Rock, Oklahoma State University, Louisiana Tech University, Texas A&M University and University of North Texas.

The project was formatted as a Request for Proposal (RFP) for the Dallas County Park City MUD Water Treatment Plant upgrade. The job consisted of renovating and expanding the existing facilities to meet possible future requirements for water quality. The estimated cost of the project was roughly \$37,000,000 and only 2 years were given to finish the construction. The plant had to remain operational and continue to service the local residents while being worked on

with the exception of 11 days when the raw water filter and connection from the clearwell to the membrane building were replaced. The major challenges involved with the project were establishing a schedule that worked within the specified constraints, identifying the unique quality control and safety concerns involved in upgrading the plant, pricing the project, and quantifying the individual items of work needed to finish the project. The team proved it was more than capable at adapting to the circumstance, identifying the nuances of the project, and applying the general fundamentals of construction learned in the Texas State Construction Science and Management program.



Design Build Team Wins Third Place

The Design Build competition team was coached by Mrs. Harnish Sharma and consisted of members: John Resendez (Team Leader), Miranda Whitlock, Lauren Odle, Mark Ortiz, Stephanie Wlascinski, Kelsey Rolling and alternate Christa Wright. The team competed against: 1st place Texas Tech, 2nd place University of Oklahoma.

The Design Build Team was given an RFP for an 80,000 SF Rehab and Addiction Treatment Center. The team coordinated the design, preconstruction, and construction starting at the

schematic/concept design stage. The team's process emphasized construction management and architectural design working together on a proposal that was less expensive, more efficient, and substantively lowers risk to the owner. Design Build judges were impressed with the planning and the conceptual stage of the design. They were surprised that Texas State does not have an Architectural Department after seeing student performance, since every other team utilizes Architectural students instead of Interior Design students.

Commercial Team Wins Fourth Place

The Commercial Building competition team was coached by Dr. Vivek Sharma and consisted of members Sam Haynie (Team Leader), Daniel Hesse, Steven Haley, Garrett Whitaker, David Luera and Cody Carter. The team competed against Oklahoma State, Texas Tech and the University of Oklahoma.

The commercial team worked on a proposed building design featuring a two two-story TILT WALL office building specifically for Miramar Corporate Headquarters. The proposed office building was 35,000 gross building square feet. The building core, constructed as part of the shell building, will accommodate several functions (i.e. restrooms, and mechanical and electrical spine system). The project is in Irving, Texas, on approximately a 2.67-acre overall site, at the Southeast corner of County Line Road and Valley View Lane. The current program consists of THE class A corporate office, surface parking with approximately 120 spaces, the project to be LEED Gold Certified (Shell & Core as well as, the T.I. work), Hardscape, Landscaping, and Irrigation.

Scholarships

Congratulations to Tina (Christina) Amundson and Angel Hurtado, who each recieved a \$2,000 scholarship from the TEXO Foundation at the ASC Competition on February 9, 2018.

CIM Program Update

Scholarships

Six freshmen and transfer students in the CIM program (Jason Dove, Collin Nerby, Trevor Reisz, Jose Sierra, Savanna Sitz, and Maria Valdez) received NSC ISSF scholarships in the fall and spring semesters for a total of \$7,200 in the fall and \$7,100 in the spring. These scholarships are funded by the CIM National Steering Committee.

The CIM Patrons Board will award scholarships later this spring to outstanding students in the CIM program.

Three Texas State CIM students (Mason Davis, Jeremiah Crespo, and Savanna Sitz) were awarded scholarships in December 2017 by the San Antonio Chapter of the American Concrete Institute.

One CIM student (Mason Davis) was awarded a scholarship in December 2017 from the Central Texas Chapter of the American Concrete Institute.



Community Outreach

Dr. Wilde visited the Jones Futures Academy in Houston, Texas to present the CIM program to about 200 high school students who are interested in the concrete, construction, and architecture industries. The students learned about the program, the concrete industry and potential jobs. They also were able to mix up some concrete to take home a few days later.



The CIM program was presented to hundreds of high school counselors from across Texas at the Texas School Counselors Association convention in Galveston, Texas in February 2018. Many of the counselors asked for personal visits by the CIM program to their schools so that students can have a first-hand invitation to learn more about the program.



The New Braunfels Academy sent about 25 fifth graders to Texas State University in November 2017 to tour the concrete lab and other facilities in the department. The students got to see what goes into concrete, and were able to watch a large concrete cylinder being tested in compression.

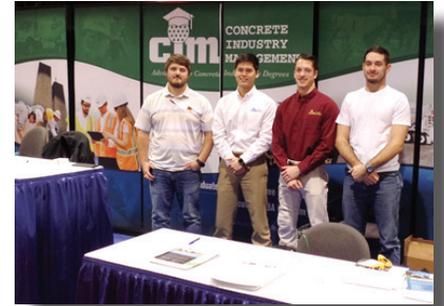


Conferences

Six students were able to travel to Las Vegas for the World of Concrete convention and trade show. The students attended three educational sessions each, and spent some time working in the CIM booth at the trade show. They had a great time interacting with students in other CIM programs in Tennessee,



New Jersey, and California. In addition to the students, Drs. Wilde and Aguayo attended, with President Trauth, Provost Bourgeois, and Dean Hailey.



Two students (Jeremiah Crespo and Garret Senne) made presentations in the Bob Weatherton student internship presentation competition.



As a special treat, the students and Dr. Wilde toured the Hoover Dam and the Mike O'Callaghan-Pat Tillman Memorial Bridge between Nevada and Arizona over the Colorado River.

Bobcat Made

A maker space is a collaborative lab where you can work on personal or class projects.

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--- Training Always Available ---**



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Tuesdays Thursdays
11 AM – 7 PM 11 AM – 3 PM

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Want to be a part of Texas State's new maker space, Bobcat Made?

We are looking for volunteers to expand our open use hours

AND to have fun making, of course!!

Just show up for open use hours! Special Making Nights
and additional training sessions coming this semester.

Questions? Contact Dr. Kimberly Grau Talley, PE: talley@txstate.edu