



Engineering Technology News

Texas State University -- San Marcos

VOLUME I, Number 2

Fall 2012

CHAIR'S MESSAGE

Welcome to the fall 2012 edition of the *Engineering Technology News*. In this edition you will find information about new faculty members joining the department, our outstanding technical support staff, student professional organizations, industry and community outreach activities, and scholarly and grant accomplishments of our students and faculty.

Many exciting things await us in the year ahead. We continue our long-standing relationships with the Texas Chapter of the American Foundry Society (AFS) and the Foundry Educational Foundation (FEF). You'll find an article on page 5 about the spring meeting of Texas AFS held in San Marcos. At that meeting one of our graduates, Mr. Eric Meyers, gave a presentation on the importance of FEF to the foundry industry. The foundry program at Texas State has been an FEF-certified program since 1996 and our program was recently recertified for another five years.

We are eagerly awaiting accreditation site visits for two of our academic programs this year. Our Construction Science and Management (CSM) program is scheduled for its American Council on Construction Education (ACCE) accreditation review in early October. The faculty of our CSM program have been preparing for ACCE accreditation for a number of years, and we are most excited about the prospect of achieving this important goal.

Our Concrete Industry Management (CIM) program is scheduled to undergo National Steering Committee accreditation review in the spring. The CIM program at Texas State is one of only five such programs in the nation. The other four programs are located at Middle Tennessee State University, California State University – Chico, Arizona State University, and New Jersey Institute of Technology. CIM began to be offered at Texas State in spring 2009, and we graduated our inaugural class in December 2011. Accreditation is a long-awaited goal that our CIM faculty have worked studiously to achieve, and we look very much forward to accomplishing that goal later this year.

We will be joined in January by a new assistant professor in the area of foundry, heat treatment and metallurgy. Dr. Laura Bartlett comes to us after receiving her Ph.D. at Missouri University of Science and Technology, long recognized as one of the country's premier programs in metallurgical engineering. Dr. Bartlett will help to strengthen our already robust relationship to the foundry industry in Texas, and she will join our FEF Key Professor, Dr. Vedaraman Sriraman, in supporting AFS student chapter activities. You can find an article about Dr. Bartlett on page 3. We look forward to her arrival at the beginning of the upcoming spring semester.

Our student professional associations continue to grow and thrive. The Construction Student Association (CSA) just elected a new slate of officers for the 2012-2013 school year. CSA hosts many activities throughout the year including the Homecoming Tailgate party and spring Golf Tournament. You can find details about CSA on page 4.

Continued on Page 2.

The Texas State University System Board of Regents

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Please go to the website below to check for updates on the Board of Regents.
<http://www.tsus.edu/leadership/regents.html>

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KUDOS TO FACULTY



Dr. Vedaraman Sriraman to Serve as Presidential Fellow

One of our department's senior faculty members, Dr. Vedaraman Sriraman, has been selected to serve as the new Presidential Fellow for 2012-2013. During the coming academic year, Dr. Sriraman will serve as a member of the

President's Cabinet and will work with President Trauth on special projects. Dr. Sriraman was selected for this honor on the strength of his proposal that examined the relationship between engineering and engineering technology programs and the university's recent designation as an emerging research institution.

Dr. Sriraman holds a bachelor of science degree in mechanical engineering from the Regional Engineering College in Calicut, India, a master of science degree in mechanical engineering from the Indian Institute of Technology in Kharagpur, India, and a doctor of engineering in industrial engineering from Lamar University.

After serving as an instructor in the Industrial Engineering Department at Lamar University, Dr. Sriraman joined the Texas State faculty in 1991, as an assistant professor in the Department of Technology. He was subsequently promoted to associate professor and professor. He became the program coordinator of the Manufacturing

Engineering program in 2000. He has since served as Texas State's director of engineering programs, as interim chair of the Department of Physics, and as interim chair and chair of the Department of Engineering Technology. Dr. Sriraman led the development of several academic programs at Texas State, including the electrical engineering and the concrete industry management programs. He has secured external grant support, including several National Science Foundation grants. He has authored many journal articles, presented many conference papers, conducted many workshops and institutes, and serves currently as a faculty senator representing the College of Science and Engineering.

The faculty, students, and staff of the Department of Engineering Technology wish to congratulate Dr. Sriraman on his appointment as Presidential Fellow. It is an honor of note to have a member of our senior faculty selected to serve in such a distinguished capacity.

CHAIR'S MESSAGE CONTINUED

Our student chapter of the American Foundry Society (AFS) remains actively engaged with the foundry industry in Texas. Member companies of Texas AFS send guest speakers to campus about four times a year and also sponsor at least one field trip to a nearby foundry.

Details about the AFS student chapter can be found on page 5.

The Society of Manufacturing Engineers (SME) is a long-standing student association on the campus of Texas State and includes members drawn from both the Department of Engineering Technology and the Ingram School of Engineering. Dr. Farhad Ameri is the faculty co-advisor for Engineering Technology, and Dr. Bahram Asiabanpour is the faculty advisor for the School of Engineering. Details about SME can be found on page 5.

We recently established a new student association in the department, the American Society of Mechanical Engineers (ASME). This new student chapter will serve mechanical engineering technology majors as well as other students interested

in mechanical engineering drawn from the School of Engineering. Dr. Byoung Hee You is the faculty sponsor for ASME. A brief announcement about this new student association can be found on page 5.

The student chapter of the American Concrete Institute (ACI) recently elected a new slate of officers for the coming academic year. The student members of ACI are involved with several student competitions throughout the year and also travel to many job sites, local plants, and concrete industry trade shows. Dr. Jiong Hu is the faculty advisor for ACI. Details about this student club can be found on page 6.

Our department continues to be involved with industry and community outreach activities. A number of interns have been placed over the past two years with Supply Chain Services International (SCSI), a supply chain and quality assurance service provider to Caterpillar. An article about the internship experiences of recent interns can be found on page 7. We are most grateful to SCSI for providing our students with such outstanding internship experiences.

Two community outreach activities have occurred since the spring newsletter. In April, about 70 members of the Boys and Girls Club of South Central Texas came to campus, toured several laboratories in the R. F. Mitte building, and witnessed several demonstrations. Then, in May, the department was host to several students from the San Marcos Montessori School. Dr. Jiong Hu took these youngsters on a tour of our concrete lab and let them experiment with mixing and casting concrete. Details of these events can be found on page 8.

As mentioned, many exciting things are happening in the department. We hope you enjoy this fall edition of Engineering Technology News. We will bring you another edition in the spring and catch you up with the goings on at that time. And, if you should happen to find yourself in the San Marcos area, please take that opportunity to drop in and visit us. We always enjoy seeing former students, old friends, and industry partners.

NEW FACULTY

Laura Bartlett, Ph.D. Assistant Professor

Laura Bartlett was born and raised in Hayti, Missouri, a sleepy little farming community near the banks of the Mississippi River. In January 2013 she will join the Engineering Technology Department as Texas State's new assistant professor specializing in metals casting and heat treatment. Prior to joining Texas State, she attended college at Missouri University of Science and Technology where she received her bachelor's degree in Metallurgical Engineering in December, 2008. She attended graduate school at Missouri S&T and will receive her doctorate in Metallurgical Engineering in December, 2012. During her career at Missouri S&T, she received the

prestigious G.A.A.N.N. fellowship, which is given to outstanding graduate students pursuing a doctorate in materials science and engineering who plan to develop a career in academia. She is director of the mechanical testing lab and has taught numerous classes at Missouri S&T including metals microstructural development and mechanical behavior of materials labs. In the spring of 2012 she was awarded the Boots Clayton Award for outstanding teaching in the field of metallurgical engineering. This was the first time this award was given to a graduate student and the first time it was given to a woman. Laura emphasizes a hands-on approach to teaching and good communication skills when reporting results from lab activities. Laura's research is in the development of high strength cast steels for high energy absorbing

capabilities. These steels are high in manganese and aluminum and are up to 17% less dense than traditional steels with twice the fracture toughness. Possible applications for these steels include military P900 armor plate and automotive body frames. Laura has published numerous articles in the field of cast steel research and was fortunate to win the 2011 and 2012 best paper awards during the American Foundry Society's annual Metalcasting Congress. Her expertise is in casting, heat treatment, mechanical processing, mechanical testing, and failure analysis of both ferrous and nonferrous alloys. She hopes to bring her love of foundry and materials science to the Engineering Technology program to get students interested in metals casting and heat treatment.

ABOUT THE STAFF



Shane Arabia

Shane is the laboratory technician supervisor for the Department of Engineering Technology. Shane joined Texas State after serving in the United State Marine Corp. His can-do attitude can be attributed to "once a Marine, always a Marine." Shane maintains the operation of the Roy F. Mitte Building and provides support and assistance to faculty, students and others.



Marcus Ickes

Marcus is the microcomputer lab coordinator, for the Department of Engineering Technology. He maintains lab computers for Engineering Technology, as well as faculty and staff computers. He also helps out where he can. Marcus' education includes an A.S. in engineering electronics technician from South Plains College in Lubbock, Texas, 1988 and a B.S. in information technology from the University of Phoenix, 2008. Marcus' work experience includes Texas Instrument as a photolithography equipment technician in Lubbock and Tokyo Electron in Austin as a photolithography equipment engineer. His hobbies are keeping up-to-date on computer trends, reading science fiction, and writing in his journal. Marcus is married and has two boys he is very proud of; one is attending Texas State University and doing very well. The youngest boy works hard at home on the yard and loves power tools. Marcus is here at Texas State University because his wife encouraged him to pursue his interests.



Ted Cera

Ted is the senior laboratory services technician for the Department of Engineering Technology. Ted Cera has earned both his B.A. in philosophy and M.S. in industrial technology from Texas State University. During his graduate studies, he assisted Dr. Batey with the Architectural Design and Problem Solving course. Ted has held positions as a software game tester, Sunday school teacher, operations manager, and AutoCAD lecturer. Now you may find Ted making, or breaking, things in one of the many labs on the first floor of the RFM building.

STUDENT ORGANIZATION NEWS



2012-2013 CSA OFFICERS

Back (L to R): Stad Tomlinson - President, Travis Calhoun - Vice President, and Andrew Chistopher, ABC Ambassador; Front (L to R): Jason Daves - Treasurer, Robert Staples - AGC Ambassador, Austin Everett - NAHB Ambassador, and Amber Austin - Secretary.

CSA NEWS

The Construction Student Association (CSA) is a student-run organization at Texas State University. CSA was founded to provide professional opportunities for students who plan to enter the construction industry upon graduation. It also serves as a link between the educational and real-world frontiers. CSA offers the opportunity of real-world and professional experience, networking with potential employers, building upon students' resumes, and the chance to give back to the community.

The CSA continues to operate multiple committees to better facilitate members' personal, professional and career growth. The Community Outreach Committee coordinates projects around San Marcos in order to give back to the community that supports our students and the university. These projects give students the opportunity to learn to work as part of a team, to build their individual leadership skills and gain useful hands-on experience in a construction environment. In the past, members worked at the Allen Woods Housing complex, a low-income housing community, where they moved a foot bridge on site and installed bus stops, picnic areas and playscape equipment. This year's activities include the installation of wheelchair access ramps at homes where they are needed and involvement in building a local habitat for humanity house.

The Continuing Education Committee provides members additional learning and training opportunities outside the classroom.

Each semester multiple job-site tours are scheduled to allow participants the chance to see first-hand the practices and operations of a live construction project. Also, throughout the semester, the CSA hosts guest speakers who make presentations that keep members up-to-date with current industry practices and technologies. In order to make our members increasingly marketable, OSHA 10-hour and OSHA 30-hour certification classes are scheduled to assist in furthering professional careers.

The Special Events Committee plans and coordinates the annual Homecoming Tailgate and Spring Golf Tournament. The Homecoming Tailgate allows students, professors and alumni a chance to mingle informally outside the classroom. Additionally, industry professionals are involved with our program. The Annual Spring Golf Tournament is a great opportunity for students and potential employers to network. Students get to interact with companies they are interested in working for after they graduate, and companies get to meet with students in a recreational setting.

The Construction Student Association is a thriving organization dedicated to professional development, moving our department and university into the future and giving back to our community. We look forward to this year and the opportunities and challenges it provides.



2012 CSA SPRING GOLF TOURNAMENT

CSA's largest fundraiser of the year is the Annual Golf Tournament. The 2012 tournament was held at Onion Creek Golf Course, in South Austin, on March 30. We had 12 companies come out and participate, and Pok-e-Jo's Smokehouse catered the event.

The goal of the golf tournament is not only to raise funds for CSA, but also help students and industry professionals network, in hopes of connecting for future internships or job opportunities. A team consists of four players, (two industry professional and two students) in a "scramble" style tournament.

This year's winning team was the Hensel Phelps team. This team consisted of Ben Keillor (student), Daniel Biskamp (student), Jason Fletcher (HP Field Engineer), and Jay Herzing (HP Superintendent).

From everybody at CSA, we would like to thank all those who came out to participate and volunteer at this year's tournament. Without you, this event would not have been possible. A big thank you to this year's senior officers who worked hard to coordinate a successful even: Alex Trevino, Ben Keillor, Brady Wallace, Russell Hall and Ryan Syring.

STUDENT ORGANIZATION NEWS



AFS NEWS

The Texas Chapter of the American Foundry Society (AFS) held its April board meeting in San Marcos on the evening of Friday, April 13, 2012. Several faculty and students from the Department of Engineering Technology and the Ingram School of Engineering were in attendance. Dr. Robert Habingreither, associate dean of the College of Science and Engineering, and former Foundry Education Foundation (FEF) Key Professor, gave



a presentation on the long history of close ties that have existed between Texas AFS and the foundry program in the Department of Engineering Technology. Mr. Eric Meyers, president of Oil City Iron Works, member of the board of directors of FEF, and an alumnus of the manufacturing program at Texas State gave a presentation on the importance of the Foundry Education Foundation to the foundry industry. The foundry program in the Department of Engineering Technology has been an FEF-certified program since 1996. Faculty attending the event included Dr. Bahram Asiabanpour, Dr. Farhad Ameri, Dr. Byoung Hee You, Dr. In-Hyouk Song, Dr. Vedaraman Sriraman – current FEF Key Professor, and Dr. Andy Batey – chair of Engineering Technology. Students in attendance included Mark Stiggers – president of the AFS student chapter at Texas State, Marshall Reeske, vice president, Alexandria Williams, secretary, and Colbey Solis. University staff employees present included Mr. Shane Arabia, lab technician supervisor for the Department of Engineering Technology, and Mr. Ted Cera, senior lab services technician. Texas AFS holds at least one board meeting every year in San Marcos as a means of maintaining its close ties to the faculty, students, and staff of the foundry program at Texas State.

American Foundry Society (AFS) AFS Student Chapter 2012-2013 Officers

Faculty Advisor: Dr. Vedaraman Sriraman
President - Nicholas Hirsch
Vice President - Sean MacLeod
Secretary - Justin McNamara

Society of Manufacturing Engineers (SME)

Engineering Faculty Advisor: Dr. Asiabanpour
Engineering Technology Faculty Advisor: Dr. Ameri

SME Student Chapter 2012-2013 Officers:

President - Isidro Rosas
Vice President - Jamie Humble
Secretary - Sabra Serino
Treasurer - Mario Pozos
Event Coordinator - Anthony Ahrens
Public Relations - Bryce Davis

The Texas State Chapter of the Society of Manufacturing Engineers is open for membership by all engineering technology and engineering students. SME was organized to promote professional growth and social activity among its membership. All interested university faculty and students are welcome to join.

The Society of Manufacturing Engineers is the world's leading professional society advancing manufacturing knowledge and influencing more than half a million manufacturing practitioners annually. Through its communities, publications, expositions and professional development resources, SME promotes an increased awareness of manufacturing engineering and keeps manufacturing professionals up to date on leading trends and technologies.

E-mail SME Student Chapter:
sme@tracs.txstate.edu

ANNOUNCING ASME Student Chapter

Calling all engineering technology – mechanical engineering technology majors:

We are announcing a new student chapter:
American Society of Mechanical Engineers Student Chapter



Students interested in membership, please contact:
Dr. Byoung Hee You at by12@txstate.edu
or Glenn Connor at tc1262@txstate.edu

STUDENT ORGANIZATION NEWS



American Concrete Institute ACI Student Chapter 2012-2013 Officers

Faculty Advisor: Dr. Jiong Hu

President: Marcus Flores

Treasurer: Nicholas Nelson

Vice-President: Hayden Mitchell

Secretary: Breena Madrid

Advisor: Chase David

ACI NEWS

The American Concrete Institute (ACI) is a nonprofit technical and educational society and one of the world's leading authorities on concrete technology. As its mission states, its purpose is to "Provide knowledge and information on the best way to use concrete." When Texas State University added the Concrete Industry Management (CIM) program to its Engineering Technology Department, it also became host to its very own student chapter. The ACI student chapter hosts monthly meetings involving professional presentations and interactive activities. The Chapter also participates in national concrete competitions, attends local ACI Chapter meetings and conferences, and organizes tours of local construction sites. The Chapter's main purpose is to bridge the gap between academia and the industry.

The construction and concrete industry needs new young professionals to enter the job force. Helping to open new recruiting opportunities, the ACI student chapter has organized semi-annual social events at Plucker's Wing Bar. The entertaining and casual events have included Texas Aggregate and Concrete Association (TACA) and other professional companies that encourage new recruiting and networking opportunities between students and the industry. The ACI student chapter, along with the CSA organization, host tailgating events and encourage our industry supporters to come out to all Texas State football games.

ACI News Continued on Page 9



INTERNATIONAL CONCRETE SUSTAINABILITY CONFERENCE

Concrete is the most consumed resource in the world after water so the integration of recycled materials into concrete production is considered a worthwhile challenge in the construction industry. With this understanding, graduate assistants incorporate various recycled materials and byproducts of industrial processes into research initiatives under the advisement of the Concrete Industry Management faculty. In May 2012, the National Ready Mixed Concrete Association hosted the International Concrete Sustainability Conference in Seattle, giving experts the opportunity to present the latest developments in the design, construction and research of concrete as it relates to sustainable development. One of our graduate assistants, Ashley Kotwal, attended the conference to gain knowledge regarding the latest advances, technical knowledge and solutions for concrete manufacturing and construction. Ash also presented the results of his study titled, "Recycled Carpet Fiber Reinforced Concrete with Recycled Concrete Aggregate," which was well-received by university and industry professionals. In addition to being an outstanding learning and networking opportunity, he considered the venture to be invaluable for improving his effectiveness as an instructional leader. Deeming the experience an essential element of his graduate-level education, Ash also presented the results of another study at the Precast/Prestressed Concrete Institute Convention in September 2012.

INDUSTRY OUTREACH



Intern Doug Petty with Manager Eric Diffy



Intern Petar Buva with Ellen Carson, Tom Klukowski Facility Manager, and Shawn Peterson



Interns Sam Rhotenberry, Petar Buva and Doug Petty

SCSI CATERPILLAR VISIT

On Wednesday, August 8th, 2012, Dr. Andy Batey visited the new Caterpillar Engine Assembly Plant in Seguin, Texas, to observe end-of-semester presentations made by three interns employed by Supply Chain Services International. SCSi is a supply chain and quality assurance services provider for Caterpillar. Ms. Deborah Draper, the human resources representative for SCSi, invited Dr. Batey to attend the presentations. Ms. Draper and Mr. Tom Klukowski, the facility manager for SCSi, have visited the campus of Texas State University and have recruited interns from the Department of Engineering Technology, the Ingram School of Engineering, and the McCoy College of Business. This year's crop of interns included Doug Petty, an industrial technology – manufacturing major, Sam Rhotenberry, an industrial engineering major, and Petar Buva, who is an engineering graduate of the University of Zagreb and a graduate of the International Business master's program at Texas State. Among those SCSi managers who helped supervise these interns were Ms. Ellen Carson, an engineering technology graduate and one of last year's interns, Mr. Eric Diffy, and Mr. Shawn Peterson. The Department of Engineering Technology, Ingram School of Engineering, and McCoy College of Business are most grateful to SCSi for their support of our academic programs and for providing such exemplary internship experiences to our students.

CONSTRUCTION ADVISORY BOARD - 2012/2013

Mr. Randy Pawelek - Advisory Board President
Chairman/CEO/President
Bartlett Cocke General Contractors

Mr. John Dunn
Vice President Business Development
Brandt Engineering

Mr. Brandon Gaeke
Sr. Project Manager
Turner Construction Company

Mr. Cisco Hobbs
Vice President Healthcare Group
Rogers-O'Brien Construction

Dr. Earl Ingram, Ph.D., P.E.
President
Ingram Readymix, Inc.

Mr. Bill Norton
Senior Project Manager
Project Control

Mr. Chris Peck
Vice President Business and Development
McCarthy

Mr. David Stayshich
Corp. Construction Engineering Manager
Construction Technical Services
Fluor Corp.

Mr. Joel Stone
CEO (as of Jan 2012)
SpawGlass

Mr. Ken Trainer
President
Chesmar Homes

Mr. Michael Vickery
Senior Vice President
Baker Triangle

COMMUNITY OUTREACH



CONCRETE KINDERGARTEN

On May 8, 2012, the Department of Engineering Technology Concrete Industry Management (CIM) program hosted a special field trip for San Marcos Montessori School students. The activity included a tour of the Texas State concrete lab, a hands-on activity called Concrete 101 presented by Dr. Jiong Hu, compressive strength testing, concrete mixing and casting, concrete decoration, and a concrete coloring book. A total of 18 students (ages 5 to 7) attended the field trip and had fun with concrete. CIM students

Sawyer Flache, Breena Madrid and Kevin Clare helped with the event.



The Boys & Girls Club of South Central Texas Visits Texas State University

On April 17, 2012, approximately 70 students from the Boys & Girls Club of South Central Texas visited the Texas State University campus. The Department of Engineering Technology hosted a tour of several laboratories and classrooms, providing students with a better understanding of the many uses of technology. The coordinator of club programs and operations,

Mr. Elton Fite, wrote: "That opportunity really helped to show the club members that the use of technology extends far beyond just computers, cell phones and applications. This provided them many answers to questions they may wonder about on a daily basis on a drive home with mom or dad, such as how is concrete made? How do THEY build a building?, etc."

About the Boys & Girls Clubs of South Central Texas

The Boys & Girls Clubs of South Central Texas provides services for youth that reside in Caldwell, Comal, Hays and Guadalupe counties. The club's mission is to inspire and enable all youth, especially those who need us most, to realize their full potential as productive, responsible and caring citizens. For more information about this event or the Boys & Girls Clubs of South Central Texas, visit:

www.bgcst.org

Elton D. Fite Jr., Coordinator, Club Programs and Operations
Boys & Girls Clubs of South Central Texas
400 Uhland Road, San Marcos, Texas 78666
512.805.3000 p 512.805.7739 f 512.557.2839 c

LABORATORY UPDATES

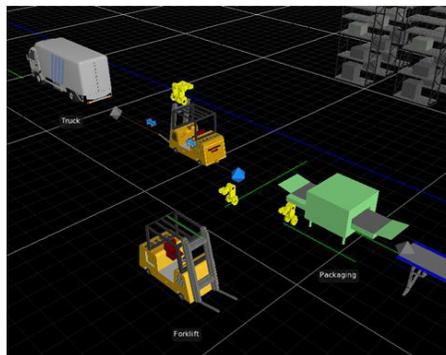
New ABB robot for the Robotics Lab:

The robotic lab in the Department of Engineering Technology acquired a new industrial robot from ABB Robotics. This robot uses the latest technology in the robotic industry, it is ABB's smallest ever multipurpose industrial robot, and can handle a payload of 3kg (4kg for vertical wrist) with a reach of 580mm. Also, the department purchased a 50-seat license for RobotStudio, a robotic simulation software that can be used for online and off-line programming. RobotStudio was used for the first time in the lab section of TECH 4391 in summer 2012.



New simulation package for TECH 4357

Simio, a discrete-event simulation software, was used for the first time in the Facilities Planning course (TECH 4357) in spring 2012. Simio can be used to predict and improve the performance of dynamic, complex systems in manufacturing systems, supply chains, transportation, healthcare, and many other disciplines in the service industry. Simio uses state-of-the-art 3D visualization technology, based on Google 3D Warehouse, that allows students to create a realistic visual model of the system under analysis. Students in TECH 4357 used Simio for flow analysis and space planning for their term project. The Manufacturing Facilities Planning course is taught by Dr. Ameri.



ELECTRONICS LAB UPDATE

During this past summer, our electronics lab was renovated. This renovation increased floor space, which allowed the incorporation of two more student workstations and construction of a faculty research lab that did not exist before. The renovation also included a computer upgrade to replace the aging machines that were not capable of running many of the newer versions of software. To further increase space in the lab, some equipment was relocated to a lab on the first floor as this equipment was quite large and only used for one class per year. The new lab is more open and allows for more desk space. Adding more desks was an important change since this lab is also used as a normal classroom. The result is a room with better functionality and accommodates more students.



ACI NEWS Continued

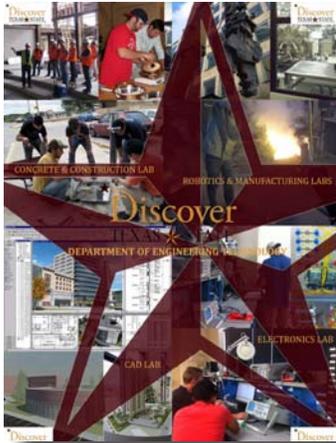
With the many facets of the concrete and construction industry, such as sales, research, application, maintenance and product development, it can be difficult for students to find their focus. At the ACI student chapter monthly meetings, guest speakers present knowledge of the concrete or construction industry. The speakers can usually answer industry-related questions, as well as, open up new possibilities for students to explore. Last year's speakers included Sean Van Delist on pervious concrete, Derek Kong on petrography, Marvin Bragewitz from Texas Lehigh on the concrete industry, and a few graduating seniors spoke on their summer internship experiences.

The Texas State ACI student chapter represents the university at national concrete competitions around the country. Last year CIM students Chase David, Daniel Calhoun and Seth Eggert participated in the pervious concrete competition and Isaac Cedilo, Kevin Clare and Cody Houser participated in the bowling ball competition. Finishing among the top teams, our students represented Texas State admirably. This year students from the CIM program will be competing in the egg protection device competition in Toronto, Canada, as well as other ACI competitions.

Directly bridging the gap between Texas State University students and the construction industry are the ACI organized tours of local construction sites and concrete factories. Last year ACI student chapter members were included in four new construction tours of our very own Texas State University including the new Bobcat stadium, DHRL Admin building, and the Performing Arts Center. Student chapter members also attended three off-site tours including the Lehigh Cement Plant, Ingram Readymix Plant, and Heldenfels Enterprise.

The ACI student chapter of Texas State University has involved students of the Engineering Technology Department for the past three years and has set high goals for the future to come. ACI will continue to nurture a healthy, long-standing relationship between our student members and the concrete industry, as well as, promote the knowledge and information on the best way to use concrete.

DISCOVER TEXAS STATE DAY



On Saturday, September 29, the university hosted Discover Texas State Day. This is an annual event in which the families of current and prospective students are invited to campus so that the key programs of interest for this year may “showcase their stellar programs, departments and people.” The departmental open house highlighted our hands-on programs. The open house ran from 10 a.m. until about 1 p.m.



Ms. B.J. Spencer served as our departmental coordinator



for the event, setting the agenda for the many demonstrations, exhibits and tours. She created posters and handouts that helped participants with the circulation paths for the different exhibitions and lab tours and solicited student volunteers and faculty participation.



The walking tour of the department took guests by the foundry (Mr. Shane Arabie), the machine shop (Mr. David Hanzel), the semiconductor fabrication lab and more.

Demonstrations, exhibits or hands-on activities were presented in the concrete and construction lab, the clean room adjacent to the semiconductor fabrication lab, the automation lab, the electronics lab, and the architectural drafting lab.

Dr. Jiong Hu gave a demonstration of concrete testing equipment in the concrete lab that made a really BIG BANG with the participants.

Dr. Kimberly Talley and Mr. Vivek Sharma provided a straw building competition in the construction lab, where towers practically REACHED THE SKY!



DISCOVER TEXAS STATE DAY

Ms. B.J. Spencer and Dr. Cassandra Hager made a presentation on building information modeling (BIM) in one of the architectural design (CAD) labs, showcasing the three-dimensional modeling software being taught.



Last, but certainly not least, Dr. In-Hyounk Song and Mr. Bill Pool, along with several students, provided HOT LIGHT/solar car racing in the electronics lab.

When it rains the solar cars do not go so fast, so students did a little problem-solving and improvised with several different kinds of lighting to find the one bulb that make the cars go the fastest. One 5-year-old Bobcat cheerleader really made those CARS FLY!



CSA and ACI students served as tour guides, meeting guests in the main lobby and escorting them to the demonstrations. Other students helped with demonstrations and hands-on activities. Our dedicated departmental staff made sure every participant received a free pair of safety glasses before entering the festivities, and provided an end-of-tour goody bag before leaving our department. It was determined by the number of



Dr. Farhad Ameri presented a demonstration of the new robot in the automation lab.

Dr. Byoung Hee You and graduate student Glenn Conner, introduced participants to the gowning process of the clean room. Guests were able to observe through the viewing windows the semiconductor fabrication lab.



safety glasses handed out, that the number of participants was approximately 200. Our guest's ages ranged from 1-year-old Emily (the daughter of Travis and Ashley Calhoun) to a spry 80-year-old Mr. Andy Batey Senior. Mr. Batey and his wife, Grace, are alumni

of the university from the 1950s and early 1960s. They actually made the trek from the Roy F. Mitte Building to Old Main AND BACK while visiting our campus.



Despite the rainy day, the Discover Texas State Day was a great success. All participants including guests, faculty, staff and students seemed to have a wonderful technological experience.



NIST UPDATE

The Semantic Supplier Discovery project, sponsored by NIST, was successfully completed at the Engineering Informatics Research Group and the final report was submitted in July 2012. From a broad perspective, the objective of this project was to create new standards, knowledge models, and search methodologies and algorithms that can improve the intelligence of supplier discovery process in virtual and distributed environments, thus enabling automated supply chain configuration. The developed sourcing platform in this project can significantly enhance the global competitiveness of the U.S manufacturers through improving their visibility and enhancing their web presence. A journal article is submitted to the International Journal of Computer-integrated Manufacturing based on the findings of this project. Also, the results were presented in two international conferences: ASME Design Engineering Technical Conference (DETC) and ASME Engineering Systems Design and Analysis (ESDA) Conference in summer 2012.

TxDOT GRANTS

Department of Engineering Technology faculty have recently completed three TxDOT projects (0-6729, 0-6681 and 0-6677) and received four new projects (0-6749, 0-6764, 0-6789 and 0-6792) this new fiscal year. Together with two earlier projects (0-6137 and 0-6668), the nine projects total close to \$1.3 million since 2009.

The following is a list of the nine TxDOT projects:

- J. Hu, D. Fowler, S. Lee, Y. Kim, and D. Whitney, "Feasibility Study of Two-Lift Concrete Paving, Project", sponsor(s): TxDOT (RTI 0-6749), Amount: \$136,947, 09/2012-08/2013
- I. Castro-Arellano, C. Gaedicke, D. Hahn, M. Forstner, C. Green, and K. Talley, "Contribution of Bridge Dwelling Birds to Bacterial Water Quality Impairments", Project sponsor(s): TxDOT (RTI 0-6764), Amount \$389,684, 10-1-2012 to 11-31-2014
- Y. Kim, J. Hu, S. Lee, C. Gaedicke, "Synthesis on Geosynthetic-Reinforced Steep Slopes", Project sponsor(s): TxDOT (RTI 0-6792), March 2012, Amount: \$49,984, 09/2012-08/2013
- Y. Lu, D. Tamir, J. Hu, and H. Shi, Automated Crack Documentation Using Digital Images-Scoping Study, Project sponsor(s): TxDOT (RTI 0-6789), March 2012, Amount: \$94,376, 09/2012-08/2013
- M. C. Won, S. Senadheera S., D. Fowler, and J. Hu, , "Optimizing Concrete pavement Type Selection Based on Aggregate Availability", Project sponsor(s): TxDOT (RTI 0-6681), Amount \$170,000, 09/2011-08/2012
- J. Hu, Y. Kim and S. Lee, "Synthesis on Cost Effectiveness of Extradosed Bridges", Project sponsor(s): TxDOT (RTI 0-6729), Amount \$49,984, 09/2011-08/2012
- S. Lee, J. Hu, and Y. Kim, "Costs Associated with Conversion of Surfaced Roads to Un-surfaced Roads", Project sponsor(s): TxDOT (RTI 0-6677), March 2011, Amount \$118,112, 09/2011-08/2012
- S. Lee, J. Hu, C. Gaedicke and Y. Kim, "Synthesis of Microsurfacing Successes and Failures", Project sponsor(s): TxDOT (RTI 0-6668), Amount \$49,931, 11/2010 – 08/2011
- J Hu, D. Hahn, W. Rudzinski, C. Powell, N. Guven, S. Lee, and G. Beall, "Evaluation, Presentation and Repair of Microbial Acid-Produced Attack of Concrete", Project sponsor(s): TxDOT (RTI 0-6137), Amount \$252,557, 09/2009 – 08/2011

AFRL GRANT

Engineering Informatics Research Group (Infoneer) received a \$30,000 grant from the Air Force Research Lab (AFRL), in the context of the Connecting American Manufacturing (CAM) project. The objective of the CAM project is to develop an advanced e-sourcing solution that serves as an integrated framework to enable rapid, high-density, multi-sector brokering between buyers and sellers of manufacturing services. Researchers at Infoneer will focus on development of formal ontologies for representation of technological capabilities of manufacturing suppliers. Imaginestic LLC is the industry partner in this one-year project.

CALLING ALL ALUMNI

The Department of Engineering Technology has created an alumni database. We have also established a group page on LinkedIn, where former students can network with one another. We need your help in updating our database. Please contact Sylvia Salinas at s_s200@txstate.edu to receive the alumni survey. She will send you a link to the web address so that you can become LinkedIn! Or, go to LinkedIn and use the group name: Texas State University Department of Engineering Technology to get connected!

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