



# Engineering Technology News

Texas State University -- San Marcos

VOLUME I, Number 1

Spring 2012

## Chair's Message:

The Department of Engineering Technology offers both bachelor degree programs and a Master of Science in Technology (MST) degree. At the undergraduate level we offer majors in Engineering Technology, Industrial Technology, Construction Science and Management, and Concrete Industry Management. Several specialized areas of study are available under the Engineering Technology major including Mechanical Engineering Technology, Manufacturing Engineering Technology, Electrical Engineering Technology, Construction Engineering Technology, and Environmental Engineering Technology. At the graduate level, the MST degree offers Manufacturing, Construction, and General specializations. Complete descriptions of these degree programs, including the curricula and courses, can be found on the departmental website:

[www.txstate.edu/technology](http://www.txstate.edu/technology)

As of Fall 2011, a total of 542 students have declared a major in our department. This total is comprised of 509 undergraduate and 33 graduate students. The total includes some 286 individuals specializing in construction, 64 majoring in Concrete Industry Management, 49 specializing in manufacturing, plus another 86 Mechanical ET, 31 Environmental ET, and 18 Electrical ET majors. Obviously, the Department of Engineering Technology is a vibrant and growing part of the Texas State University community.

Historically our students have had little difficulty securing employment upon graduation. In almost all cases, our graduates take positions in industry that

correspond to the particular major or specialized area of study they pursued while a student with us. Each year our students are afforded the opportunity to participate in at least three on-campus career fairs. One of these events focuses on careers in the manufacturing industry or with other engineering and high-technology firms. The other two job fairs revolve around the construction and concrete industries. These career fairs provide our juniors and seniors an excellent opportunity to network with potential employers and to interview for both summer internships and permanent positions.

Our curricula reflect adherence to established national accreditation standards that are appropriate to each of the technology disciplines mentioned above. In the area of manufacturing our department has been a Foundry Education Foundation certified program since 1996. Our Construction Science and Management program is in candidacy status with the American Council on Construction Education and we anticipate that an accreditation review team will visit our campus in the fall semester of 2012. Our Concrete Industry Management (CIM) program is expecting an initial accreditation review by the National Steering Committee for CIM in the spring of 2013. We conduct on-going learning outcomes assessment for all of our programs and reporting of these results is updated annually. Input provided by several industrial advisory committees contributes toward continuous improvement and the currency of our curricula and courses.

*Continued on Page 2*

## CALLING ALL ALUMNI

In order to make better connections with our alumni, the department 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](mailto:s_s200@txstate.edu) to receive the Alumni Survey instrument. Once contacted, 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!

Department of  
Engineering Technology

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## INSIDE THIS ISSUE:

Chair's Message	Page 1-2
Alumni Search	Page 1
CIM Student News	Page 2
New SAE Student Org	Page 3
New Faculty	Page 4
About the Faculty	Page 5-10
Grants	Page 5
About the Staff	Page 10
CSA Student News	Page 11
History of the Department	Page 12

## Chair's Message Continued --

Our faculty maintain currency in their respective fields of expertise through continual engagement in applied research and scholarship, and through professional development activities. Over just the past three years department faculty have succeeded in securing upwards of \$800,000 in external funding from federal and state agencies and from educational foundations. Our faculty have also been very active in publishing the results of their research in scholarly journals. The department is fortunate to be the professional home of such dedicated faculty members who take their commitment to higher education so seriously.

As an applied discipline, Engineering Technology is committed to experiential learning and exploration. The Roy F. Mitte building, which is home to the department, houses 19 well equipped, technical laboratories where students put into practice the principles learned in their classes. Learning by doing is fundamental to who we are, and students can expect to spend a significant portion of their time in a laboratory setting. As you explore our website, take a few moments to notice the many photographs of our exceptional facility. It is in these modern, well equipped laboratories that students will apply what they have learned.

Once again, I want to thank you for your interest in the Department of Engineering Technology and in the academic programs we offer. I hope you will enjoy your virtual tour of our department as you navigate our web site. Upon completing that tour, if you should find that you would like additional information about the department or the degree programs we offer, please don't hesitate to contact us. Our faculty will be happy to respond to e-mail inquiries, and you may call the departmental office at any time to arrange an appointment with a faculty advisor.

*Sincerely yours,*

**Dr. Andy Batey, Chair and Graduate Advisor**

## CIM GRADUATES

Since established in January 2009, the Concrete Industry Management (CIM) program has had a steady growth from eight to sixty-five majors. The first group of majors that graduated on December 16, 2011 were all successfully placed in the concrete industry.



Second row (from left to right): Mrs. Gloria Ingram and Mr. Bruce Ingram.  
First row (from left to right): Mr. Charles Carter, Mr. Griffin Taylor, Mr. Christopher Traina and Mr. Travis Mouser.

## ACI COMPETITION

CIM students participated in the Pervious Concrete Student Competition at the ACI Fall Convention on October 17, 2011 at Cincinnati, Ohio. The Texas State Team of: Chase David, Seth Eggert, and Daniel Calhoun took home the 2nd place prize in load-to-cost category among more than 30 teams from the United States and abroad attending the competition. This was the second year in a row that Texas State students won an award from ACI competition. The students design used recycled aggregate, recycled carpet fibers, and fly ash to keep cost low at \$37 per cubic yard.



From left to right: Dr. Cristian Gaedicke (CIM faculty and ACI faculty advisor), Mr. Seth Eggert, Mr. Chase David, Mr. Daniel Calhoun, Dr. Jiong Hu (CIM faculty), and Mr. Walter Flood IV (ACI Committee Chair S801- Student Activities)



# SAE International Student Chapter formed at Texas State University --

## *“Students, Start Your Engines!”*

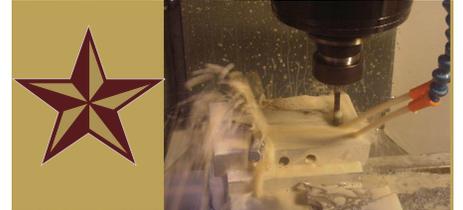
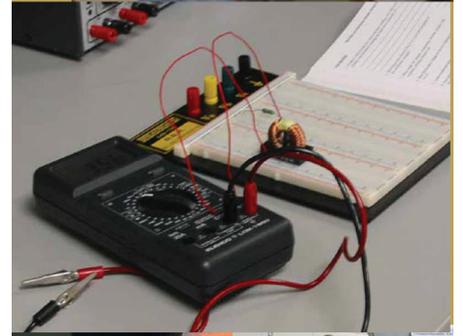
Texas State University is now the proud home of an SAE International – student chapter. The organization, comprised of primarily Engineering and Engineering Technology students, focuses on expanding opportunities and resources to connect and learn about industries in ground, sea, and aerospace vehicle engineering. With this addition of another organization to the professional and academic organizations focused around the College of Science and Engineering, Texas State students now have even more opportunities to gain hands on engineering design experience while bolstering the image of our growing School of Engineering.

The Society of Automotive Engineers was founded in 1905, in response to a growing need for cooperation and technical standard development in the then budding automotive industry. Today it is one of the largest global associations of engineers and automotive professionals, producing a veritable myriad of technical papers, standards, magazines, and printed books that are today considered to be some of the most definitive works on everything from Road Vehicle Dynamics to Electronic Control Systems. SAE works continually and cooperatively with experts in all vehicle engineering fields to ensure that when there is a new revelation, or innovation in a field of research, their publications are on the cutting edge of technology. This focus on the future provides members, as well as the industry as a whole, new and emerging information as it develops. Members of the organization are given much of this information for free or at a significant discount. In addition to access to over a centuries worth of technical standards and research, members can network with professionals and connect with companies in the industry that are eagerly searching for candidates via SAE’s member exclusive Career Center.

Perhaps the most realizable benefit, here at Texas State University, will be the opportunity for our students to work in real

world hands-on engineering projects. SAE International is home to the Collegiate Design Series, a competition that takes place yearly around the world in several different categories and locations in which competitions are held. Currently Texas State’s student chapter has begun work on developing a vehicle suitable to compete in the 2013 Formula SAE competition. The Formula SAE series is the world’s largest inter-collegiate engineering and design competition. Involvement in this series by students from the Ingram School of Engineering and the Department of Engineering Technology will provide invaluable exposure and recognition to our excellent and always growing engineering programs on an international stage. Students will design and build an open-wheeled formula styled racecar to compete against teams from around the world, in dynamic events (vehicle performance based), and static events (such as vehicle design and evaluation of applied engineering process). With vehicles accelerating from 0-60mph in under 4 seconds, and rivaling performance of modern-day “supercars”, student engineers can easily see and feel the fruition of their work. The project will provide opportunities to apply and hone a student’s engineering education in a self-motivated challenge, while also engaging the student in real-world project management, interpersonal relationship development in an engineering atmosphere, as well as a glimpse into the world of business management of long term projects and planning.

SAE International at Texas State is currently seeking and recruiting student members of all majors and fields of discipline who are interested. Student’s seeking membership can become “student members” for only \$20 a year. If you would like to join, sponsor, or would like more information please contact Matthew Andrews, President of SAE International at Texas State at [Matt.Andrews@txstate.edu](mailto:Matt.Andrews@txstate.edu)



## NEW FACULTY



**Kimberly Talley, P.E.**  
Assistant Professor

A native of Raleigh, North Carolina, Dr. Talley joined the Construction Science and Management program in January 2012 and is presently teaching Construction Estimating. She is slated to additionally teach Construction Scheduling starting in 2013. Prior to joining the faculty at Texas State University - San Marcos, Dr. Talley worked as a designer in a structural engineering firm, Datum Engineers, in Austin, TX. Additionally, Dr. Talley served as an adjunct associate professor of engineering at Austin Community College, also in Austin, TX.

Both of Dr. Talley's graduate degrees, a doctorate and masters in Structural Engineering, are from the University of Texas at Austin. For those degrees her research areas were repair of ASR/DEF affected concrete bridge columns (doctorate) and cost-benefit analysis of corrosion protection schemes in externally post-tensioned concrete bridges (masters). Additionally, Dr. Talley holds two undergraduate degrees from North Carolina State University: one in History and the other in Construction Engineering and Management. This particular degree combination was triggered

by a unique dual degree program, the Benjamin Franklin Scholars, that aimed to produce globally-minded engineers who could not only solve analytical problems, but also make sound, ethical decisions and communicate their ideas effectively.

Dr. Talley's primary research focus is on technology and engineering education at the undergraduate level. Within this field, she is interested in pursuing the research areas of active-learning products, project-based learning, and implementation of state-of-the-art engineering education research. Additionally, Dr. Talley is interested in exploring cost-benefit analyses of various construction methodologies and retention of under-represented groups in technology education.

When away from the university, Dr. Talley and her husband, Austin, dote on their seven-month old daughter, Genevieve.

### Our Newest Arrival

Miss Genevieve Pearl Talley,  
Born September 7, 2011

Proud parents Kimberly and Austin Talley



**BJ Spencer**  
Architect AIA  
Senior Lecturer  
Internship Co-Coordinator

Ms. Spencer is presently pursuing a Ph.D. in Education here at Texas State University – San Marcos with her emphasis on professional architectural education. She received a Master of Architecture from Texas A&M University – College Station in 2007 where her thesis project was titled “Italian Swiss Architecture – A Study in Tectonic Form and Critical Regionalism”. Her undergraduate is a B.S. in Interior Design from Southwest Texas State University, 1984, with a minor in Technology.

With 23 years of industry experience in architecture and construction (design/build) in San Marcos & Austin, Texas (1984 to 2007), her roles included architectural intern, project manager, office manager, construction cost accounting, scheduling, and estimating.

She has worked at Texas State as a Lecturer from 2007 to 2009; as an Adjunct Lecturer from 2010 to 2011; and as a Senior

Lecturer from August 2011 to the present where she instructs the architectural design courses offered in the Construction Science and Management program as well as acts as Co-Coordinator for the internship program.

While attending Texas A&M in 2006, Ms. Spencer attended a study abroad semester at the Università della Svizzera italiana, Accademia di Architettura di Mendrisio, Switzerland. Her atelier was with the Milan architect, Antonio Citterio and her theory course was with Stanislaus von Moos and Elia Zenghelis (an original partner of the architectural firm, OMA). She returned to the Accademia di Architettura in 2009 in their Masters Program as she investigated their newly formed Ph.D. program before electing the Ph.D. in Education back here at Texas State University – San Marcos.

Ms. Spencer's research interests include: architectural professional education, study abroad, international education of architects, education in online and virtual environments, building information modeling, and sustainable construction practices.

## GRANTS

Engineering Informatics Research Group (INFONEER) received a research grant from the Systems Integration Division of the National Institute of Standard and Technology (NIST) for the academic year 2011-2012. This grant will support Dr. Ameri's group for conducting research in the area of ontology development for autonomous supplier discovery. From a broad sense, the objective of the proposed research is to create new knowledge models and semantic search algorithms that can improve the intelligence of supplier discovery process in virtual and distributed environments, thus enabling automated supply chain configuration. One of the goals of this project is to enhance the cyber-infrastructure of the manufacturing industry in order to enable American manufacturing companies to compete globally.

## ABOUT THE FACULTY

### Andy H. Batey

Department Chair  
Associate Professor  
Graduate Advisor

Dr. Andy Batey is a 27-year veteran of the faculty of the Department of Engineering Technology. He joined the faculty in 1985 after three years of graduate study at the University of Maryland where he earned his Ph.D. in Industrial Education.

Dr. Batey had been a student in the department previously, completing both his bachelor's and master's degrees at what was then Southwest Texas State University. Counting his years as a student, Dr. Batey has been involved with the department, in one way or another, for over 33 years. During that time the department and university have seen many changes. The university became Texas State University in 2003, and it has grown to 34,000 students, more than double its size when he first enrolled as a student in the early 70's. Meanwhile, the name of the department has changed many times, from Industrial Arts in the 70's to Technology in the 80's to Engineering and Technology in 2005, and finally to its current name, Engineering Technology.

During his tenure as a faculty member, Dr. Batey has taught 16 different courses including Materials Engineering, Electricity/Electronics, Power Technology, Engineering Design Graphics, Methods Engineering, Statistical Process Control, Research

Methods, Design of Experiments, and Architectural Design. Dr. Batey is well known for his teaching and student-centered approach to academic advising. He was named Outstanding Teacher in the School of Applied Arts and Technology for the year 1988. In 1997, he was selected as a Favorite Professor by the Student Members and Officers of Alpha Chi Honor Society. In 2005, he was nominated by former students for inclusion in Who's Who Among America's Teachers, and he has remained an honoree of that publication since. He was again selected as a Favorite Professor by both the graduate and undergraduate inductees of the Alfred H. Nolle Chapter of Alpha Chi Honor Society in fall 2010 and spring 2011. Throughout his career as a university faculty member teaching has been his focus and preoccupation, and Dr. Batey enjoys the respect and friendship of many devoted former students as a result.

Dr. Batey has served as the Graduate Advisor for the Master of Science in Technology degree since its inception in 1995. In that capacity, he has served as committee chair and primary thesis advisor on the thesis projects of five MST graduates, and as a committee member on the thesis projects of four additional masters graduates.

Dr. Batey served as the Interim Chair of the department throughout the 2010-2011 academic year and was subsequently appointed to the post of Chair on September 1, 2011. He continues to teach graduate courses in the MST program, and he is actively involved with all aspects of day-to-day department management.

### Vedaraman Sriraman

Professor  
Concrete Industry  
Management Coordinator

B.S. Regional Engineering College  
M.S. Indian Institute of Technology  
D. Eng. - Lamar University

Dr. Vedaraman Sriraman joined Texas State in 1991 with degrees in Mechanical and Industrial Engineering. He is currently Professor, Interim Director of the Concrete Industry Management (CIM) program, and the Foundry Educational Foundation (FEF) Key Professor. He has served the department and college in various

capacities including manufacturing engineering program coordinator, engineering programs coordinator, assistant dean in the College of Science and department chair. He currently serves on the faculty senate from the College of Science and Engineering.

His teaching interests include: engineering science, applied statistics, sustainability and industrial engineering oriented courses. In the past, he has received several campus wide teaching awards including the Alumni Association Teaching Award of Honor and the Presidential Award for Excellence in Teaching. He is the current faculty advisor to the student chapter of American Foundry Society (AFS) and was a past advisor for SME. He has served as a reviewer for ABET. His research interests include: engineering/technology education, applied statistics and sustainability. His research has been funded in the past by the NSF and SME-EF.

## ABOUT THE FACULTY



**Gary Winek**  
Professor  
Construction Science and  
Management Coordinator

Dr. Gary Winek joined Southwest Texas State University in 1981, before the name was changed to Texas State University. He is now the most senior faculty member in the department. He is a native of Milwaukee, Wisconsin and received his Undergraduate Degree from the University of Wisconsin – Stout, his Masters from Ball State University and his Ph.D. from the University of Maryland – College Park.

During his tenure at now Texas State University – San Marcos, he has seen the department mature and has witnessed four departmental name changes beginning with the Department of Industrial Arts. In 1984 with the introduction of the new Industrial Technology Degrees, the department's name changed to the Department of Industrial Technology. With the addition of Engineering to the departmental offerings, the name changed again to the Department of Engineering and Technology. When Engineering became its own school, the Department changed its name to its current title of the Department of Engineering Technology.

Dr. Winek is currently a Professor and the Construction Program Coordinator. He has seen the construction program grow from its humble beginnings in 1984, to a stand-alone degree in Construction Science and Management with a Business Minor. This program has about 250 students and is the largest major in the department. The program also holds two construction specific job fairs per year and has its own Advisory Board and a very active Construction Student Association (CSA).

He has taught 12 different classes over his career and is currently instructing the Introduction to the Construction and Concrete Industry course to students who are entering the Construction Science and Management Program and the Concrete Industry Management Program, which was offered for the first time in 2009. He also teaches Residential Construction System and a graduate course titled Readings in Technology.

When not working, he enjoys spending time with his wife and two grown daughters. He also enjoys wilderness back packing and has nearly completed segment hiking the 185 mile Superior Hiking Trail. He also enjoys world traveling, especially to tropical island paradises.



**Farhad Ameri**  
Assistant Professor

Dr. Farhad Ameri joined the Department of Engineering Technology in January 2009. He received his B.S. degree in Industrial Engineering in 1997 from Iran University of Science and Technology and M.S. degree in Industrial

Engineering from Sharif University of Technology, Tehran, in 1999. He has five years of industry experience working as a Systems Engineer for different automotive companies including Ford Motor Company. He received his doctorate degree in Manufacturing Engineering from the University of Michigan, Ann Arbor, in December 2006 under the supervision of Dr. Deba Dutta. In January 2007, he joined Automation in Design (AiD) research group in the Department of Mechanical Engineering at Clemson University as a post-doctoral research fellow working on various industry-sponsored projects from companies such as BMW and Michelin.

Dr. Ameri's teaching interests are broadly in the area of manufacturing systems engineering and he teaches different graduate and undergraduate courses including Facilities Planning, Computer-Integrated Manufacturing, Statistical

Process Control, and Product Design and Development. Dr. Ameri's primary research areas include Engineering Informatics, Industrial Automation, and Multi-Agent Systems for Design and Manufacturing. He is the head of Engineering Informatics Research Group (Infoneer) at Texas State. His papers are published in renowned journals such as ASME Journal of Computing and Information Science in Engineering, ASME Journal of Mechanical Design, International Journal of Advanced Engineering Informatics, Research in Engineering Design, and Computer-Aided Design and Applications. Dr. Ameri closely collaborates in research with multiple government and academic institutions including National Institute of Standards and Technology (NIST), Technical University of Munich, University of Michigan, University of Illinois at Urbana-Champaign, and University of Texas at Austin. He is a member of American Society of Mechanical Engineers (ASME) and the co-advisor for the Texas State chapter of the Society of Manufacturing Engineers(SME) student club. Dr. Ameri has served as a technical committee member at ASME's Systems Engineering, Information, and Knowledge Management (SEIKM) committee since 2009.

Dr. Ameri is a big fan of nature and outdoor activities and his red Jeep is famous among his students. His favorite sports include skiing, tennis, soccer, and cycling. Photography and music are among his other hobbies. He was a member of the Persian Music Ensemble at the University of Michigan and he plays two Persian musical instruments.

## ABOUT THE FACULTY



**Christian Gaedicke,**  
Ph.D., PE  
Assistant Professor

A native of Santiago, Chile, Dr. Gaedicke joined the Concrete Industry Management program in September 2009 and is presently teaching Concrete Properties and Testing, Understanding the Concrete

Construction System, Industrial Safety and Capstone. Prior to joining the faculty at Texas State University - San Marcos, Dr. Gaedicke worked as a Graduate Research Assistant at the University of Illinois at Urbana-Champaign, and Chief of

Research and Development at DICTUC Consulting in Santiago, Chile.

Dr. Gaedicke holds a Ph.D. in Civil Engineering from the University of Illinois at Urbana-Champaign, and a M.S. and B.S. in Civil Engineering from the Department of Construction Engineering and Management at the Catholic University of Chile. Dr. Gaedicke is a Licensed Professional Engineer in the State of Texas.

Dr. Gaedicke's primary research focus is on sustainable infrastructure, and he is interested in characterizing the performance of concrete using large portions of recycled materials. Additionally, Dr. Gaedicke is interested in experimental and computational fracture mechanics applied to concrete pavements and infrastructure.



**Jiong Hu**  
Assistant Professor

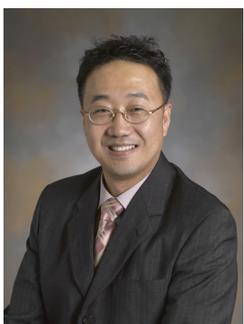
Dr. Jiong Hu joined Texas State University – San Marcos as an Assistant Professor in the Concrete Industry Management (CIM) Program in 2008. Dr. Hu received his BSc in Construction Materials in 1996 and MSc in Materials in 1999 from

Southeast University, China, and his Ph.D. in Geotechnical and Materials Engineering from Iowa State University in 2005. He is teaching construction and concrete related courses including Construction Materials and Processes, Concrete Construction Methods, Management of Concrete Products and Concrete Problems: Diagnosis, Prevention, and Dispute Resolution.

Currently, Dr. Hu is a member of American Concrete Institute (ACI) committees 130, Sustainability of Concrete; 237, Self-

Consolidating Concrete; 238, Workability of Fresh Concrete; 555 Concrete with Recycled Materials; and Texas Department of Transportation (TxDOT) Research Management Committee (RMC) Technical Advisory Panel (TAP) members of RMC 1, Construction and Maintenance; and RMC 5, Structures and Hydraulics.

Dr. Hu also served as PI and Co-PI in multiple projects related to innovative concrete technology and sustainable concrete development, associated with Federal Highway Administration (FHWA), Texas Department of Transportation (TxDOT), Iowa Department of Transportation (Iowa DOT), and Department of Defense as he worked at Texas State University – San Marcos, and National Concrete Pavement Technology (CP Tech) Center, Iowa State University. His research interests include advance cementitious materials, sustainable concrete, self-compacting concrete (SCC), fresh concrete properties and rheology of concrete, Portland cement concrete (PCC) pavement, non-destructive testing (NDT) of concrete structure.



**Yoo Jae Kim**  
Assistant Professor  
PE, LEED® AP

Dr. Kim became involved in the Texas State University-San Marcos Concrete Industry Management (CIM) Program in the fall of 2009. Dr. Kim holds a doctorate in structural engineering, as well as, two

master's degrees—one in construction management and the other in construction materials in concrete from Washington University in St. Louis.

He has extensive professional experience in structural design, 3D Modeling with Tekla Structure, and seismic analysis (Static and Dynamic) where Dr. Kim performed the structural analysis

and design work for concrete, steel, and prestressed /precast structures. He has a comprehensive knowledge of design standards and codes. Dr. Kim's experience also includes LEED® Certified Facilities. His research interests include Finite Element Modeling, FRP materials, constitutive modeling of concrete materials with emphasis on failure and post failure behavior, high strength and fiber reinforced concretes, seismic retrofit of steel, and concrete structures, and earthquake resistance of new structures.

Currently Dr. Kim is a member of the Precast/Prestressed Concrete Institute (PCI), a committee voting member of the Seismic and Design Handbook and Texas Department of Transportation (TxDOT) Research Management Committee (RMC), and a Technical Advisory Panel (TAP) member of RMC 5, Structures and Hydraulics.

## ABOUT THE FACULTY



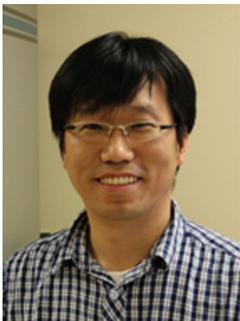
**Soon Jae (Jeff) Lee,**  
Assistant Professor  
Ph.D., LEED AP

Dr. Soon-Jae (Jeff) Lee joined Texas State University in the Construction Science and Management Program in 2008. He received his Ph.D. in Civil Engineering from Clemson University in 2007. He is currently teaching

“Soils and Foundation” and “Construction Project Management and Scheduling”. Dr. Lee has been conducting research in the area of pavement materials and maintenance, especially in hot mix asphalt, since 1996. His current Texas Department of

Transportation (TxDOT) research work includes “Microsurfacing in Texas (0-6888)” and “Conversion of surfaced roads to unsurfaced roads in Texas (0-6677)”.

Dr. Lee was employed as the Asphalt Team Manager for Korea Laboratory Accreditation Scheme (KOLAS) for the Research Center for Advanced Construction Materials at Kangwon National University for five years. In this role, he was primarily responsible for managing and conducting research in several areas of pavement technology and preparing reports and proposals. In total, he has approximately 16 years of experience in materials and pavement evaluation. His research has resulted in over 80 refereed journal, conference papers, and research reports that are well-cited in addition to more than 30 presentations around the country and the world.



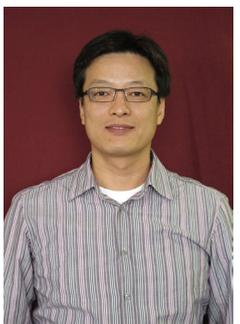
**In-Hyouk Song,** Ph.D.  
Assistant Professor

Dr. In-Hyouk Song received his B.S. degree in Electronics Engineering from Sun Moon University, Korea in 1995. He received his M.S. and Ph.D. degrees in Electrical Engineering from Louisiana State University, Baton Rouge, LA in 2002 and 2005 respectively.

Dr. Song worked as a postdoctoral research associate at the Physics Engineering Department, Ecole Polytechnique de

Montreal, Montreal, Canada. He also served as a research associate at the Institute of Microstructural Sciences of National Research Council of Canada, Ottawa, Canada. Since 2010, he has been with the Texas State University, San Marcos, Texas, where he is currently an Assistant Professor of Engineering Technology and the Coordinator of the Nano and Microsystems Laboratory.

Dr. Song’s areas of research interest include Microelectromechanical systems (MEMS), including design, modeling, and fabrication of microstructure, microsensors, and microactuators. His research efforts have focused on developing the bio/chemical-sensing device combining optical and MEMS techniques.



**Byoung Hee You,** Ph.D.  
Assistant Professor

Dr. You received his B.S. and M.S. in Mechanical Engineering from Yeungnam University in 1994 and 1996, respectively and Ph.D. in Mechanical Engineering from Louisiana State University (LSU) in 2008.

He joined the Department of Engineering Technology in September 2009. Prior to joining Texas State, he worked as a

Postdoctoral Research Associate in the Department of Mechanical Engineering and Center for Bio-Modular Multi-Scale Systems at LSU.

His research interests include design, fabrication, and characterization of micro- and nanosystems and kinematic design and assembly tolerance analysis/allocation for mechanical systems. He is currently an assistant professor in the Department of Engineering Technology, Texas State University-San Marcos.

## ABOUT THE FACULTY



**Cassandra Hager, Ph.D.**  
Senior Lecturer  
Accreditation Co-Chair

Dr. Hager joined Southwest Texas State University in 1998. She received her Bachelor of Science in Technology with a Major in Industrial Technology in 1996 with a Texas Teacher Certification for Technology Education – Secondary Level; and her Master of Science in Technology in Industrial Technology in 1999, from SWT. She received her Ph.D. in Architecture from Texas A&M University – College Station in 2005 with her dissertation topic: “Developing Standards for Undergraduate University Construction Education Internship Programs.”

Although her Ph.D. is in Architecture, her major area of study was in Construction within the Department of Construction Science and her minor area of study was in Curriculum Development within the Department of Education.

Dr. Hager’s research interests include: construction education and building information modeling (BIM).

During the 18 years of industry experience in printing technology (1981 to 2000), her roles included: typesetter, graphic artist, project manager, office manager, cost accounting, scheduling, and estimating; along with sole proprietor of the print brokering business, “The Printer’s Friend”.

Dr. Hager has worked at Texas State as a Lecturer from 1998 to 2011 and as a Senior Lecturer from August 2011 to the present. She has taught 15 different courses during her 13 year career. She presently teaches the architectural design courses offered in the Construction Science and Management program, as well as, acts as co-chair for the accreditation committee and is a member of the internship committee, the website committee and is the new editor of the departmental newsletter.

When not working, she enjoys spending time with her two grown sons. She also enjoys her time with her daughter-in-law and her two grandsons. Her favorite hobbies including: turning her 1956 Ford Thunderbird into a streetrod, quilting and stained glass.



**David Hanzel**  
Senior Lecturer

Mr. Hanzel received his M. Ed. in 1982 from Texas State University in Industrial Arts and a B.S. in 1980 from Texas State University in Industrial Arts.

David is a Senior Lecturer with over 23 years of experience teaching for the department. During Mr. Hanzel’s tenure at Texas State he has taught the following Courses: Furniture Design and

Construction; Assembly Processes; Engineering Design Graphics; Fundamentals of Architectural Problem Solving & Design; Residential Construction Systems; and Construction Contract Administration and Site Organization.

David’s service to the department includes: Faculty search committee participant; Staff search committee participant and Laboratory management.

David has 16 years business experience as Owner/Operator of Hanzel Welding & Construction 2/78 – 9/94.

In the community, David is a PONY League youth baseball coach. Mr. Hanzel is married with four boys.



**Bill Pool**  
Senior Lecturer

Mr. Pool received his M.S.T. in Industrial Technology in 1998 from Southwest Texas State University – San Marcos and his B.S. in Information and Computing Sciences in 1972 from Trinity University, San Antonio.

For the past 16 years Mr. Pool has taught at Texas State University—San Marcos, as a Senior Lecturer 1998 to present, and as a Graduate Instructional Assistant 1996 – 1998.

Bill has 22 years of professional work experience. In the aerospace industry, Bill worked for Loral/Ford Aerospace, Houston, TX and Huntsville, AL in the following positions: Senior Engineer/Deputy Project Manager; Senior Engineer ; and Systems Engineer; Senior Software Engineer. He also worked as a Systems Programmer at Trinity University, San Antonio, TX 1972 – 1977.

Mr. Pool is a Society of Manufacturing Engineers (SME) Certified Manufacturing Technologist. And, is a member of the American Foundry Society (AFS).

Bill has taught 16 courses during his tenure here at Texas State and is currently helping with curriculum development of the Engineering Technology program.

## ABOUT THE FACULTY



### Scott Rowe Senior Lecturer

Mr. Rowe started at Texas State University in 1976 as a freshman Math major. He graduated in 1981 with a teaching certificate in Industrial Arts and Driver Education. Mr. Rowe worked several years as a student worker at the Traffic Safety Center teaching Driver

Education and Motorcycle Rider Courses. He completed his Masters degree in Industrial Arts in 1983 and was hired as a Lecturer in the department the following year.

During Mr. Rowe's tenure at Texas State, he has taught courses in the following areas: Driver Education Teacher Preparation, Photography, History of Technology and Industrial Safety. He also supervises student teachers in the Engineering Technology Department and manages motorcycle rider courses and workshops at the Traffic Safety Center.

Mr. Rowe is married with two children and is active as a Boy Scout leader and church bus driver. He likes to hike, bike, camp and travel.



### Vivek Sharma Senior Lecturer

After working in the industry for a total of 7 years and teaching at Del E. Webb School of Construction at Arizona State University as Adjunct faculty, Vivek Sharma joined the Construction Science and Management (CSM) Program at Texas State University in August 2009. He is presently

teaching various courses as a senior lecturer. These courses include Structural Analysis, Heavy Civil and Highway Construction Systems, Environmentally Conscious Design and Construction. He also started teaching Contracts, Ethics and Liability and the Senior Capstone course fall 2011. Prior to joining the faculty at Texas State University - San Marcos, Vivek worked for a general contractor named Kitchell in Phoenix (Arizona). At the same time, Vivek taught Statics and Strength of Materials and Structural Analysis classes as an adjunct faculty at Del E. Webb School of Construction, Tempe, Arizona.

Vivek earned his master's of science degree from Arizona State University and is in the process of getting his doctorate in Construction Engineering and Project Management discipline under the Civil, Architectural and Environmental Engineering Program at The University of Texas, Austin. His Masters dissertation was on: "Quantitative Analysis Design Build via AZ State Route-51", a research project sponsored by Arizona Department of Transportation to evaluate project performance using design build delivery system against traditional hard bids. Currently, Vivek's Ph.D. research work (Healthcare Industry Project Benchmarking) is a collaborative effort among The University of Texas at Austin's (UT) Construction Industry Institute (CII), the U.S. Department of Defense (DoD) / Tricare Management Activity (TMA), and the U.S. Department of Veteran Affairs (VA).

Vivek also loves to work with students outside of the classroom. He is a faculty advisor / Sponsor for Construction Student Organization (CSA). He works closely with student leadership and has partaken in various CSA sponsored activities, with a vision to make traditions for CSM program students.

Vivek lives in San Marcos with his wife and two young children.

## ABOUT THE STAFF

### Sylvia Salinas

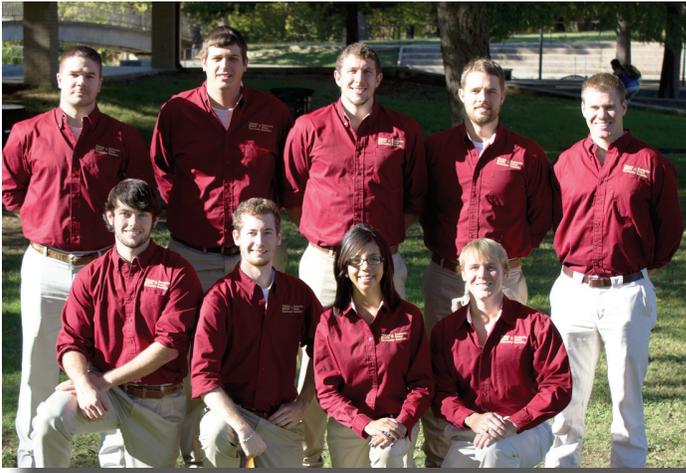
Sylvia is the Administrative Assistant II for the Department of Engineering Technology. She joined our department in October 2011. She and her husband relocated to the area from Katy, Texas, where she was an Executive Administrator for a large manufacturing firm in Houston, Texas for the past 16 years.

Sylvia provides administrative support and maintains the operation of the front office to provide assistance to faculty, students and others regarding multiple facets of registration, issues and activities pertaining to academic matters.

Sylvia has 4 children, 3 grandchildren and 2 Maltese dogs.

### Carla Collins

Carla Collins has been with our department since 2007 and is currently the department's Administrative Assistant III. She works closely with Dr. Batey, our department chair, as well as students, faculty and staff. Her main goal is to keep the office running smoothly and as efficiently as possible. Carla has a son and twin daughters, all who will be in college this fall. In her spare time, Carla likes to garden and spend time with her family including her English Bulldog, Rosie.



Back (L to R): Stad Tomlinson, Chris Roensch, Dillon Wilhelm, Ben Keillor, Jake Sigler.  
Front(L to R): Ryan Syring, Brady Wallace, Alexandria Trevino, and Russell Hall.

## WORLD OF CONCRETE 2012

The annual World of Concrete show took place January 24-27, 2012 with some 50,000 professionals in attendance. The national convention held in Las Vegas welcomed students, university officials and faculty from Texas State's Concrete Industry Management degree program. This program is one of only five programs in the U.S.

Texas State University Provost Eugene Bourgeois and University President Denise Trauth were in attendance, along with Department of Engineering Technology faculty: Dr. Vederaman Sriraman, CIM Director, Dr. Jiong Hu, Dr. You-Jae Kim, and Dr. Gary Winek.

## CSA NEWS

The Construction Student Association (C.S.A.) is a student run organization at Texas State University. C.S.A was founded on the premise of providing more opportunities for students who plan to enter the construction industry after they graduate and serving as a link between the educational and real-world frontiers. C.S.A. offers students the possibility of networking, resume building, and gaining professional experience, along with real world experience. C.S.A. came about when the student chapters of the Associated Builders and Contractors (A.B.C.), the Associated General Contractors of America (A.G.C.), and the National Association of Home Builders (N.A.H.B.), were all brought together under one "umbrella organization".

C.S.A. has recently established a few committees and traditions in order to better facilitate the needs and wants of its members, allowing them to be more active and more involved. The Community Outreach Committee coordinates projects around the San Marcos area based on giving back to the community which supports our students and our University. These projects give students the opportunity to fraternize with their peers and get useful hands-on experience. The Continued Education Committee coordinates job-site tours, OSHA 10hr and OSHA 30hr certification classes, along with various other forms of professional development. The events offered by the Continued Education

Committee are to teach students material that is otherwise not covered in the typical classroom setting. The Fundraising Committee, along with the Special Events Committee, are in charge of preparing all of C.S.A.'s current and new events. Each year they plan and coordinate an annual Homecoming Tailgate and a Spring Golf Tournament, as well as, coming up with various other events to carry out as needed. The Homecoming Tailgate is an event where the students, professors and alumni get a chance to mingle with each other informally outside of the classroom. This event also has the opportunity for industry professionals to come out and get involved with our program. The day before the tailgate, members of the C.S.A. begin cooking for the event, the menu typically consists of brisket, sausage, beans, and all of the fixings. The Annual Golf Tournament is currently C.S.A.'s largest fundraiser and is typically scheduled for the spring. This event is a great networking opportunity for students and potential employers to get face time. Students get to play a round of golf with a company they are interested in working for after they graduate, and the company gets a chance to meet with students in a recreational setting. The Construction Student Association of Texas State University is a young, thriving organization that not only helps connect students with the construction industry, but also fosters relationships that will last a lifetime.

## EDITOR'S NOTE

In this issue of *Engineering Technology News* you will find extensive information about the department. It is the intent of this publication to introduce all the new faculty and staff, reconnect our readers with older faculty, and provide background or history of the department.

Future issues will include activities of interest within the department, along with accomplishments, the status of accreditation efforts, research and grant activities, advisory council news, and student organization activities.

One edition each long semester is our anticipated publication schedule.

It has been many years since a newsletter was produced and we have come a long way baby! Hope you enjoy.

Sincerely,  
Dr. Cassandra "Candy" Hager  
*Engineering Technology News* Editor

# History of the Department of Engineering Technology

The current Department of Engineering Technology at Texas State University began life as a manual training program in the very early days of the 20th century, probably shortly after the First World War. This time period coincided with Henry Ford's mass production of the automobile, and with the development of many novel innovations in industrial efficiency.

There was a feeling at the time among professional educators that all citizens should be educated in the tools and techniques of contemporary industry, and as a result, similar manual training departments sprang up at many colleges and universities around the country. These manual training programs were dedicated to the preparation of public school teachers whose role it was to train the youth of the country in the industrial trades.

At some point during its development, the manual training program at Southwest Texas State Normal School was renamed the Department of Industrial Arts. This name change probably dates from the years immediately following World War II, a time when the institution was known as Southwest Texas State Teachers College. Certainly the Industrial Arts name had been adopted by 1952, and the departmental mission statement that appeared in the 1952-53 College Bulletin read as follows:

The general objectives of the industrial arts department are:

1. To prepare industrial arts teachers for elementary, junior and senior high school teaching.
2. To provide pre-engineering courses for students enrolled in the pre-engineering curriculum.
3. To provide technical and non-technical courses in aviation education and aeronautics.
4. To furnish students who are specializing in industrial arts and others who desire additional technical and consumer information relative to the selection, production, and utilization of industrial products, opportunities to study, construct, investigate, experiment, and explore typical industrial materials and processes utilizing modern materials, tools, and machines in a laboratory setting.

In 1952, rather than schools or colleges, departments were organized under Divisions of Instruction, and the Department of Industrial Arts was classified as one of the Practical Arts, along with Business Administration, Home Economics, and Library Science. The name of the institution was changed to Southwest Texas State College in 1959, and to Southwest Texas State University in 1969. The organization based upon Divisions of Instruction persisted until 1973 when the university was reorganized into a College of Arts and Sciences and a College of Professional Schools. The Department of Industrial Arts was housed in the College of Professional Schools, under the School of Education. Although its primary mission remained the training of public school teachers, the department had already begun to place graduates with a variety of industrial concerns, as well.

In 1984 the department was renamed the Department of Technology and moved from the School of Education to the School of Applied Arts and Technology. In addition to traditional offerings in Industrial Arts education, the department began offering a Bachelor of Science in Technology degree with majors in Industrial Technology, Industrial Systems Management, and Information Systems Management. Rather than focusing on teacher education, this new degree aimed at preparing professional managers for industry. The Industrial Systems Management major was converted into an Engineering Technology major in 1990, a precursor of future offerings in engineering, and of the department's current name.

The department had offered both a Master of Education degree and a Master of Arts degree for many years, with M.Ed. graduates going into teaching and M.A. graduates into industry. In 1995 these existing master's programs were converted into a Master of Science in Technology degree to parallel the curriculum changes that were taking place at the undergraduate level.

In 1999 the Department of Technology introduced the first engineering degree on the campus of Southwest Texas State with its introduction of a Bachelor of Science in Manufacturing Engineering. Although this is considered a milestone in the evolution

of the institution, when one looks back through the prism of history, it is clear that this development had its genesis in those very early days at the beginning of the 20th century. The department's academic affiliation was moved from the College of Applied Arts to the College of Science in the year 2000, coincident with the groundbreaking for the new Roy F. and Joann Cole Mitte building, its current home. The Mitte building was completed, and classes began to be offered in the new facility in the spring semester of 2003. Shortly thereafter, the department introduced its second engineering degree, a B. S. in Industrial Engineering.

On September 1st, 2003, Southwest Texas State University became Texas State University – San Marcos, marking a new chapter in the distinguished history of a great institution of higher education.

In February of 2005, the name of the department was changed to the Department of Engineering and Technology. In June of 2007, the name of the department was changed back to the Department of Technology, and the Ingram School of Engineering was created to administer the two existing, as well as any future programs in Engineering. The Ingram School received approval to begin offering classes in Electrical Engineering in the fall of 2008. In August of 2009, the name of the Department of Technology was changed to the Department of Engineering Technology. Today, the department continues to offer its traditional Master of Science in Technology and Bachelor of Science in Technology degrees with majors in Engineering Technology and Industrial Technology, as well as a Bachelor of Science in Construction Science and Management, and a Bachelor of Science in Concrete Industry Management.

If the future is as kind to Texas State University, and to the Department of Engineering Technology, as the past has been, only great things await us around the next bend in the road.

**TEXAS**  **STATE**  
DEPARTMENT OF ENGINEERING TECHNOLOGY