Jack N. Gerard, the President and CEO of the American Petroleum Institute (API) visited Texas Southern University on February 10, 2015. The API is the national trade association that represents all aspects of America’s oil and natural gas industry. Mr. Gerard has led API since November 2008, expanding its membership and influence in all 50 states and globally, with offices in Dubai, Singapore, Beijing, and Rio de Janeiro.

API’s Washington presence is the foundation for the oil and natural gas industry’s advocacy and outreach at state, federal and global levels on public policy, standards and certification programs, and as the source for information on industry best practices.

Discussions at the luncheon were held with Dr. Elizabeth Brown-Guillory, Associate Provost for Academic Affairs, Mrs. Carolyn Oliver, Director of Development, Dean Lei Yu, the associate deans, the department chairs, and engineering students. Mr. Gerard gave a talk to assembled students in the afternoon. He encouraged students to consider careers in the oil and gas industry because fossil fuels will still be needed for a long time despite the growth of alternative energy. He described the sudden surge in oil and gas production as a result of new drilling technologies. Mr. Gerard urged students to prepare, and take advantage of the changes that are coming to oil and gas.
College of Science, Engineering, and Technology students from the Department of Computer Science formed the TSU Mobile Application Developers Group (Group) in the fall 2014. The Group was created to give students real world software development experience and to support outreach to public schools by the Center for Research on Complex Networks. Students in the Group engage weekly with middle school students, teaching them how to program computers.

The Group began with a mini workshop called, “The Christmas Crash” which began on December 15, 2014. Participants committed to spending 6 hours each day at TSU through January 11th. During a month of daily focused study and development, the Group produced its first application called “RollCall.” Powered by the MIT App Inventor API, the Group produced an application that enables instructors to take the class roll without passing a roll sheet or calling students names individually. RollCall is now in the testing phase of development and when the application is complete, it will be available for both Apple iPhones and Android phones.

Students interested in joining the Group and learning how to develop mobile apps are asked to contact Joshua Holley, project manager for the Group at jshhlly@gmail.com. Other members of the Group are Anthony Powell, Lawrence Baedee, Enjoli Williams, and Jamaal Roby. Students worked under the mentorship of Professor O.H. Criner and were partially supported by the Center for Research on Complex Networks, Outreach and Education component.

JE Dunn Construction Company established a relationship with Texas Southern University, Construction Technology, in 2001. That relationship provided for two $2,500.00 annual scholarships to Construction majors. That support was enhanced a year later to include internship opportunities, and developed further into full time employment opportunities.

To build on the new internship requirement for the construction concentration, another JE Dunn Construction enhancement has been undertaken this semester by introducing the “Interns Dunn Right!” Program component to build upon an already successful relationship. The program is a professional development mentoring program, taught by senior personnel of JE Dunn Construction, designed to prepare students for potential internships. Topics to be covered include:

- Resume Building Workshop
- Interviewing
- Social Media
- Effective Communication
- Business Etiquette
- Networking Strategies
- Conflict Resolution and Decision Making
- Stress Management
- Time Management

This component of the program is open to everyone. However, Industrial Technology (Construction and Design) and Civil Engineering degree concentrations will be eligible for consideration for internships with JE Dunn Construction.

The program will be launched on March 25, 2015 at 2:00 PM in Fairchild Bldg. 140.

Please contact Dr. J. Jonathan Lewis at 713-313-7908 or lewis_jj@tsu.edu and/or Dr. Antoinette Roberson at 713-313-7141 or robersonan@tsu.edu
SUMMER PROGRAMS

COSET SUMMER UNDERGRADUATE RESEARCH PROGRAM
MAY 26 - JULY 31, 2015
CONTACT
Hyun-Min Hwang, Coordinator
Tel: 713 313 1028
EMAIL: hwanghm@tsu.edu

NSF RISE SUMMER RESEARCH PROGRAM
JUNE 1 - AUGUST 7, 2015
CONTACT
Shishir Shishodia, Coordinator
Tel: 713 313 7912
EMAIL: shishodias@tsu.edu

CRCN STEM ENCHANTMENT IV
JUNE 22 - JULY 17, 2015
CONTACT
Oscar Criner, Coordinator
Tel: 713 313 7923
EMAIL: criner_oh@tsu.edu

SUMMER MARITIME ACADEMY
SESSION I - JUNE 1 - 5, 2015
SESSION II - JUNE 8 - 12, 2015
CONTACT
Ursurla Williams, Coordinator
Tel: 713 313 4394
EMAIL: williamsua@tsu.edu

HOUSTON NATIONAL SUMMER TRANSPORTATION INSTITUTE
JUNE 8 - 26, 2015
CONTACT
Khosro Godazi, Director
Tel: 713 313 7925
EMAIL: godazi_kx@tsu.edu

THE BLACK PILOTS OF AMERICA SUMMER FLIGHT ACADEMY
JULY 11 - 25, 2015
CONTACT
Vernon Baker, Coordinator
Tel: 713 313 6879
EMAIL: bakervj@tsu.edu

ANNOUNCEMENTS

COSET 101: FRESHMAN MEETING
12:00 PM - 1:00 PM
TSU SCIENCE CENTER ROOM 158
MARCH 25, 2015
APRIL 15, 2015
REFRESHMENTS WILL BE SERVED

COSET ANNUAL ACHIEVEMENT AND AWARDS CELEBRATION LUNCHEON
11:00 AM - 3:00 PM
TSU SCIENCE CENTER ATRIUM
THURSDAY, MAY 7, 2015
RECOGNITIONS • FOOD • MUSIC • AWARDS
Amanda J. Henry, B.S. Biology, M.S. Biology (Texas Southern University). Ms. Henry conducted a STEM workshop on Saturday, February 28, 2015 at the Children’s Museum of Houston.

**FreshStart**, a NSBE Houston Professionals signature event, is a half day of interactive workshop for students in grades 6-12 that covers a variety of STEM disciplines and fields. It is designed to motivate students to set academic goals in STEM and provides NSBE Professionals an opportunity to give back and be role models! The students conduct STEM related experiments and case studies, hear from, and interact with working STEM professionals, as well as receive paid entry into the Children’s Museum of Houston after the program. The FreshStart 2015 was held on Saturday, February 28, 2015, at the Children’s Museum of Houston.

Shawn Williams, B.S. Biology, M.S. Candidate Environmental Toxicology (Texas Southern University). Mr. Williams represented COSET Alumni recently at the Houston Hispanic Forum’s Career and Education Day. The event took place at the George R. Brown Convention Center. The event focused on Career Paths (HB5 Endorsements-Based), Admission & Financial Assistance, Bilingual Representatives, Middle School Program, and Parent Tracks.

Dr. Shawn E. Simmons, B.S. Petroleum Engineering (University of Oklahoma), M.S. Environmental Engineering (Rice University), Ph.D. Environmental Toxicology (Texas Southern University). Dr. Simmons took part in the Seminar Series hosted by the Department of Environmental and Interdisciplinary Sciences at Texas Southern University. The goal of this weekly Seminar Series is to expose M.S. and Ph.D. Environmental Toxicology students to cutting edge research and career opportunities in the industry. Dr. Simmons presented on her experience in the industry, her current company, ExxonMobil, how she has applied her Environmental Toxicology degree, and opportunities available in this field of study.
Dr. Shishir Shishodia is an Associate Professor in the Department of Biology and Interim Associate Dean for Academic Affairs in the College of Science, Engineering, and Technology. He earned his MS in Zoology-Biochemistry and Ph.D. in Biotechnology from Banaras Hindu University (BHU), Varanasi, India. He was awarded the prestigious BHU Medal for being the valedictorian of the Department of Zoology at BHU. He also received the joint University Grants Commission-Council of Scientific and Industrial Research National Fellowship (India) in 1994 to pursue graduate school. He completed his Ph.D. work in 2 years and joined Patna University, India, as a Lecturer in Zoology (Tenure-Track) in 1996. After serving Patna University for 5 years, he moved to the University of Texas MD Anderson Cancer Center, Houston, Texas in 2001 for postdoctoral training in experimental therapeutics. During his postdoctoral training, he discovered the mechanism of action of several novel phytochemical compounds with a potential of preventing cancers. At UT MDACC, he received the Odyssey Special Fellowship Theodore N. Law Award for Outstanding Scientific Achievement for studying the mechanism of cigarette smoke-induced carcinogenesis.

Dr. Shishodia joined TSU in fall 2005 as an Assistant Professor of Biology. While at TSU, he has supervised 8 graduate students and mentored countless undergraduate and high school students. He has served on the thesis/dissertation committees of over 25 students. He also serves as the Faculty Director for the Joint Admissions Medical Program, Medical School Matriculation Program, and the Early Medical School Acceptance Program.

He served as the TSU Faculty Director of the Texas Southern University and University of Texas Graduate School of Biomedical Sciences Undergraduate Collaborative Training Program in Prostate Cancer Research funded by the US Department of Defense. He also served as a Co-Principal Investigator on the NASA University Research Center for Bio-nanotechnology and Environmental Research at TSU. Currently, he serves as the Project Director/Principal Investigator on the NSF HBCU RISE award. He has published over 60 peer-reviewed journal articles, 10 book chapters, and co-edited 2 books.

In 2010, he was awarded the TSU Scholarly Research/Creative Activities Excellence Award. In the College of Science, Engineering and Technology, he was awarded the Distinguished Research Award, Distinguished Service Award, Distinguished Undergraduate Advisement Award, and multiple Dean’s Leadership Awards.

Research Spotlight NSF HBCU RISE

The National Science Foundation funded a Research Infrastructure in Science and Engineering (RISE) award to characterize the bimolecular response to environmental stress. The research is conducted by a multi-disciplinary team led by Drs. Shishir Shishodia (PI), Jason Rosenzweig (Co-PI), Daniel Vrinceanu (Co-PI), and Hyun-Min Hwang (Co-PI). The basic objective of this research is to improve our understanding of general biological principles guiding cellular responses to environmental stress. More specifically, assessing the exposure of the Houston population to platinum group elements (PGE) discharged in automobile exhaust, and developing computer models for specific stress-related molecules with the intent of predicting their associated biochemical pathways. Although chemically inert, platinum, like other transition metals exist in several different forms having different oxidation states. It is well known that bioavailability and toxicity of metals are linked to their chemical species. Recent studies on PGE toxicity and environmental bioavailability indicated that after entering the environment, anthropogenic PGE might easily be mobilized and transformed into more toxic forms under the actions of various biogeochemical processes, and thereby, enhance their bio-availability and pose potential health risks to human beings through the food chain. Very little is known about the mechanism and biomolecular response pathways of mammalian cells to PGE.

Our observations suggest that PGE in road dust and house dust activate inflammatory pathways in lung epithelial cells. Moreover, they could pose a serious health concern as they increase the virulence potential of opportunistic gut bacteria through enhanced biofilm formation.

This RISE program also involves a mentoring initiative for graduate students to support their course preparation, effective teaching and learning, grant writing, and research. Four Ph.D. students are directly supported through this program.

This program also caters to the K-12 community and undergraduate students through summer internship opportunities to advance research-based learning experiences and to motivate students to pursue advanced degrees in STEM fields.
Staff Spotlight Khosro Godazi

Mr. Godazi serves as the Associate Director for the Center for Transportation Training and Research (CTTR) and the Associate Director for The Southwest Region University Transportation Center (SWUTC). Last year, he was appointed as Southwest Region Director for The National Technical Association. He has been the Director of the Summer Transportation Institute (STI) for the past 14 years; a program that has been held in Houston, at TSU and other institutions. Through this program he has introduced more than 400 high school students to the field of transportation and science. TSU’s STI program was recognized by The Texas Department of Transportation (TxDOT) and federal highway administration (FHWA). Mr. Godazi also spearheaded the Transportation Studies Mentorship Program and directs the Transportation Club at the Middle College for Technology Careers. Mr. Godazi directed the Houston Women in Highway Construction (HWHC) program, an on-the-job training and support service funded by TxDOT. He directs the Dwight Eisenhower Fellowship program at TSU where more than 60 students have received the fellowship. Mr. Godazi has chaired and serves on the outstanding

Student Spotlight Marquesha Foreman

Marquesha Foreman is a native of Jennings, Louisiana where she earned her diploma in 2011 from Jennings High School and graduated with a 4.00 GPA. Her eager pursuit of academic excellence led her to furthering her education in Houston—a place filled with endless opportunities for a promising scholar like herself. Since Fall 2011, Marquesha has attended Texas Southern University on a full ride academic scholarship, pursuing a degree in Mathematics and coupling her studies with a minor in Computer Science. Upon graduation, she wishes to pursue a doctorate degree in Mathematics at a prestigious institution, and she knows that the valuable knowledge she obtained from summer research these past two years has helped prepare her for graduate studies. She served as Sergeant at Arms of the University Academic Village and engaged in the TSU Hip Hop Society her freshman year. During her sophomore year, she served as Vice President of the TSU chapter of the National Society of Collegiate Scholars (NSCS). During her junior year, she served as a COSET Student Ambassador. As a senior, Marquesha is a supplemental math instructor and Miss COSET. She has had the opportunity to volunteer for various organizations such as the annual Avon Breast Cancer Walk and Agape Ministries Development Center. Marquesha’s optimistic attitude allows her to remain focused and driven. She has maintained her superb GPA throughout college while working to maintain financial stability.

Alumni Raves Shawn Simmons

Shawn Emerson Simmons, Ph.D. is the Water, Waste, and State Regulatory Manager for the Central Safety, Security, Health, and Environment (SSH&E) Organization of Exxon Mobil Corporation. Simmons has a Ph.D. in Environmental Toxicology from Texas Southern University and has worked for Exxon Mobil for 14 years. Dr. Simmons received many accolades during her undergraduate years including the Black Engineer of the Year - Student Leadership Award, Miss Black University of Oklahoma, and the Volunteer Spirit Award from General Motors Corporation. Her volunteer service continues today. Dr. Simmons is a member of Alpha Kappa Alpha Sorority, Incorporated and serves on one of its International Committees. She has served with several non-profit organizations including Child Care Council of Greater Houston, Bayou Land Conservancy, and United Way. Dr. Simmons holds professional memberships with the National Society of Black Engineers, Society of Petroleum Engineers and the Society of Women Engineers. Dr. Simmons has received the “Tomorrow’s Leader Today” Award, the YMCA Young African-American Achiever Award and was featured in Ebony magazine as one of the “30 Leaders of the Future.” At work, she is an active participant with the Black Employees Success Team (BEST), serving as the organization’s Community Outreach Chair.
A second-year graduate student, Peijia Tang, received a fellowship award from the International Road Federation (IRF). She was among the distinguished class of 30 international students from 22 different countries, selected by IRF from member universities in the United States. The IRF Fellowship Program offered students an intense 9-day training in Washington D.C. this January.

In this program, IRF fellows received executive leadership training on leadership skills, knowledge, insights, and advice for developing a successful career path.

Peijia’s current research focuses on promoting real-time eco-driving strategies to guide autonomous vehicles to drive with less fuel consumption and emissions. She will graduate this year. She hopes to apply what she has learned as well as to gain more skills after graduation.

Transportation Student Hired by Southwest Airlines

Abhilash Kumar has officially been hired to join the Southwest Airlines Assistant Dispatcher Team as of February 16, 2015. He was selected along with fifteen others from an extremely competitive interview selection that resulted in a mix of internal and external candidates. Abhilash currently works in Dallas, TX as a Senior Inflight Crew Scheduler with Southwest Airlines and has been in that role since 2011. He is a Texas Southern University (TSU) graduate with a Bachelor of Arts degree, and a Master of Science Degree in Transportation Planning and Management. While attending TSU, Abhilash worked with Dr. Carol A. Lewis in the Center for Transportation Training and Research (CTTR). All of the staff and faculty in the CTTR and the Transportation Studies Department wish Abhilash many successful years with Southwest Airlines.

Emerging Researchers National Conference in STEM

The Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM) is hosted by the American Association for the Advancement of Science, Education and Human Resources Programs and the National Science Foundation Division of Human Resource Development, within the Directorate for Education and Human Resources. The conference is aimed at college and university undergraduate and graduate students who participate in programs funded by the NSF HRD Unit, including underrepresented minorities and persons with disabilities.

The 2015 ERN Conference in Washington, D.C. held from February 19-22 was attended by Dr. Bobby Wilson, Dr. Wei Li, Dr. Daniel Vrinceanu, Dr. Maruthi Bhaskar, Dr. Shishir Shishodia, and Ms. Michelle Tolbert from the College of Science, Engineering and Technology.

Nkem Azu, NSF RISE Fellow in the Department of Environmental and Interdisciplinary Sciences made an oral presentation and received second place. LSAMP scholars, Mr. Donyeul Hoy, Ms. Raven Reed, Ms. Tracey Taylor, and Ms. Victoria Ubanyionwu, all chemistry majors, Mr. Xien Thomas and Ms. Ayzha Ward, computer science majors participated in the ERN oral and poster presentations.

LSAMP Scholar, Ayzha Ward, a senior, took first place in the undergraduate poster competition at the ERN Conference under the Computer Science Division and Information Systems. Ayzha will receive a monetary award of $300.00. Congratulations to Nkem and Ayzha for outstanding presentations.
Scholarly and Creative Activities

Publications


Books

The new book “Programmable Logic Controllers: Industrial Control” published by McGraw Hill, co-authored by Dr. Khaled Kamel and Dr. Eman Kamel was recently adopted by Siemens, for its Automation Fundamentals Certificate.

Theses and Dissertation

Dr. Khaled Kamel was invited and participated as the external Ph.D. examiner, Faculty of Information and Communication Engineering, Anna University, Chennai, India. The thesis by Ms. Jennifer S Raj, Ph.D. “Investigation on Localized Connectivity Architectures for Improved Quality of Service in Wireless Personal networks” was successfully defended in fall 2014.

Invited Talks

Mr. Vernon J. Baker was invited by Dr. Claudette Ligons, Associate Dean for Academic Affairs, College of Education to present as a panelist at the STEM Education Forum sponsored by the Center for Excellence in Education, McLean, VA, on February 24, 2015.

Staff Spotlight (continued from Page 6)

SWUTC projects and completed a study titled Feasibility of Solar Powered Traffic Signs in Houston – A step toward Sustainable Control Devices which was published in SWUTC publication and in Road and Bridges Magazine. He also developed Dwight David Eisenhower database software for FHWA. Mr. Godazi has 22 years of combined teaching and administrative experience at TSU.

Conference Proceedings


