ANNUAL REPORT

2013-2014

STEM Enchantment
Catching Them Early!

TSU COLLEGE OF SCIENCE AND TECHNOLOGY

ANNUAL REPORT 2013-2014

EDITORIAL DIRECTOR
Lei Yu

EDITOR IN CHIEF
Oscar H Criner

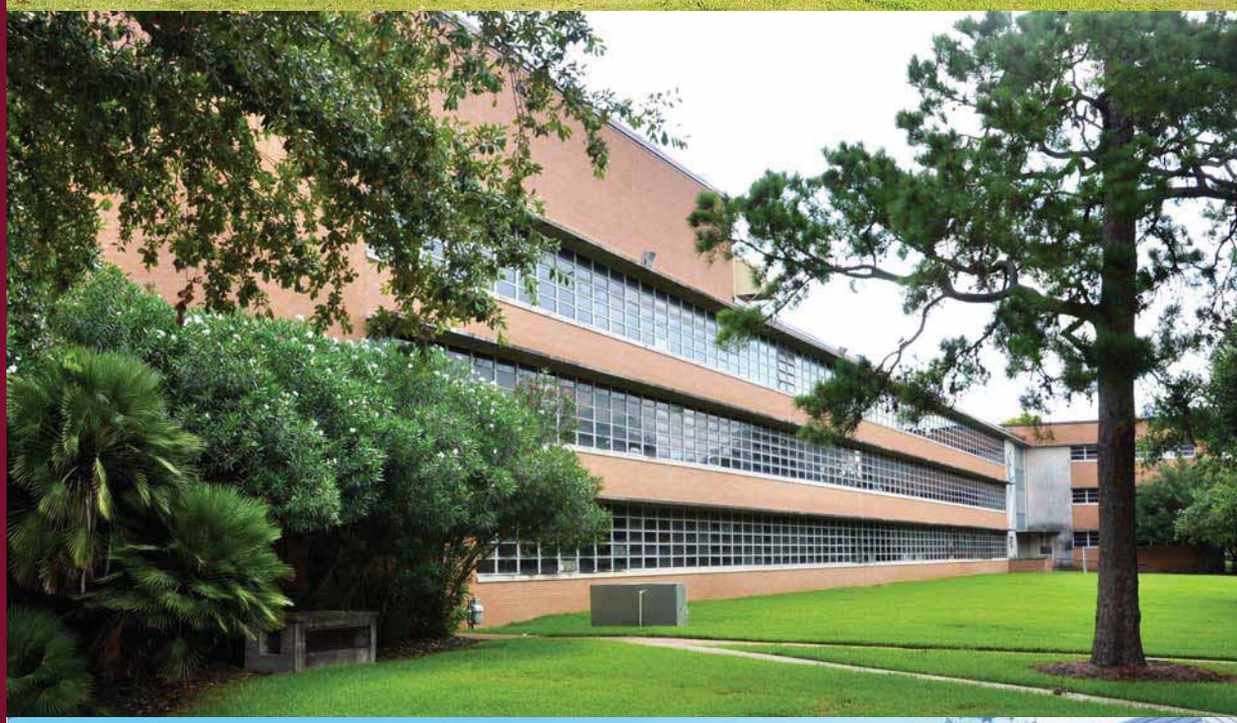
EDITORS
Desirée A Jackson
Shishir Shishodia

GRAPHIC DESIGNERS
Hector C Miranda
Shishir Shishodia

PHOTOGRAPHY
Hector C Miranda
Peter Olamigoke
Shishir Shishodia

CONTRIBUTORS
Tioka Freeman
Carlos Handy
Jesse Horner
Desirée A Jackson
Wei Wayne Li
David Olowokere
Evangeline Pearson
Jason A Rosenzweig
John B Sapp
A Serpil Saydam
Dolly Spencer
Yi Qi
Charlotte Whaley
Warren Williams

Send address and email updates to:
Ms. Charlotte Whaley
College Business Administrator III
whaley_cs@tsu.edu



Right Top: *The old Leonard H. O. Spearman Technology Building that was severely damaged during hurricane Ike.*
Right Middle: *The Nabrit Science Center was the seat of the science programs until Spring 2006.*
Right Bottom: *The new buildings of the College of Science and Technology. The building on the left is TSU Science Center and the building on the right is the new Leonard H. O. Spearman Technology Building.*

Contents

Message from the Dean

2013-2014 will certainly be remembered as another busy but extremely fruitful year for the College of Science and Technology (COST). The College is continuing to build momentum toward its sustainable success. Today, the infrastructure of the College has been substantially improved, with profound initiatives that have been implemented this academic year.

We witnessed a very exciting moment during the dedication of our newly completed Leonard H. O. Spearman Technology building on February 19, 2014. Moving into this modern facility, which is equipped with 35 state-of-the-art laboratories, is truly a milestone for the entire college family and represents a dream come true for all students, faculty, and staff who are working and studying in this building today. We are sincerely grateful to those who have made contributions, either directly or indirectly, through the challenging (but rewarding) process of constructing this building.

Student enrollment has been a big topic of discussion on the campus over the 2013-2014 academic year. The university-wide decrease in students has been substantial, and it is due primarily to the change in the federal financial aid policies. Nevertheless, COST was the only academic unit of the University that did not experience a drop in enrollment. In fact, COST observed a 4.46% increase in enrollment during Spring 2014. This is a phenomenal result and an encouraging sign of the accumulative progress that COST has achieved over the past five years. In comparison to Fall 2009, when COST was ranked fourth among all colleges and schools on campus in terms of total enrollment numbers, it is now ranked number 1.

We are very excited about our progress in the development of academic programs. COST received the official certificate from the Federal Aviation Administration (FAA) approving our proposed Private Pilot Ground School Course. This is notable because TSU is now the only four-year, state-supported institution offering a private pilot program in Texas. The Texas Physics Consortium (TPC) began offering its first classes in Fall 2013. As a member of the TPC, COST offered classes with enrolled students from all consortium member institutions. TSU students also took classes offered by other member institutions. On another front, the Electronics Engineering Program was fully reaccredited by the Accreditation Board of Engineering and Technology (ABET). Furthermore, the Aviation Science Management and Industrial Technology programs were reaccredited by the Association of Technology, Management, and Applied Engineering (ATMAE).

There have been a number of student-oriented initiatives that have taken place during the

2013-2014 academic year, all with a clear intention of improving student progression, retention, and graduation rates. Such initiatives include Midterm Madness, Final Frenzy, COST 101, and recitation sessions, all of which proved to be encouragingly successful. We will continue to develop creative ideas and programs that help our students succeed.

Research has always been an important and inseparable component of our program that supports our students and our educational activities. During the 2013-2014 academic year, COST continued to perform as the most productive college in research on campus, with a number of new proposals funded. Drs. Shishir Shishodia, Jason Rosenzweig, Daniel Vrinceanu, and Hyun-Min Hwang were awarded the National Science Foundation (NSF) Research Infrastructure in Science and Engineering (RISE) award for $1 million. Dr. Miao Pan in Computer Science and Dr. Maruthi Sridhar Balaji Bhaskar in Environmental and Interdisciplinary Sciences also received new grants from NSF. The team led by Dr. Yi Qi received the Department of Homeland Security Leadership Award. In Summer 2014, the College supported twenty Summer Undergraduate Research Program (SURP) students who worked with their faculty mentors on various research initiatives. This represents a 100% increase over Summer 2013.

There are several pre-college community outreach programs within COST that seek to encourage young people to broaden their STEM experience early in their academic activities and careers. Notable among these is the STEM Enchantment Program, which seeks to enhance the scientific, mathematical, and computational knowledge of middle school students. The STEM Enchantment program for Summer 2014 has truly enchanted its participants, as it offered serious gaming combined with academic activities. Students began to program games and develop applications (apps) for mobile devices. This program will continue to conduct outreach throughout the coming academic year.

This Annual Report will provide more details of all programs and activities undertaken during the 2013-2014 academic year. Now, as we look to 2014-2015, we are filled with excitement and a profound sense of responsibility to continue this rate of progress. We have a number of significant academic and research proposals pending, and we plan to implement a number of new initiatives. We will work as hard as we have been, and we look forward to continuously working collaboratively with all faculty, staff, students, alumni, partners, and friends to make our college one of which we can all be proud!

LEI YU, Ph.D., P.E.
Dean and Professor
College of Science and Technology

COST Board of Advisors

Chairman's Message

The 2013 – 2014 academic year for the COST Advisory Board was innovative and progressive. Discussions focusing on the pending proposals for Civil Engineering, Electrical and Computer Engineering, and Petroleum and Natural Gas Engineering Programs have occurred with implementation of the Engineering Programs anticipated for next year.

Currently, a new Industrial Outreach Plan is being developed in conjunction with the proposed Engineering Programs. The plan will focus on developing partnerships with medium size Energy firms that will increase opportunities for scholarships, internships, additional Adjunct Professorships and expanded career opportunities for Engineering Graduates.

After one semester of use, the Leonard H.O. Spearman Technology Building is turning out to be a jewel of an educational environment. From the new computer labs to the "Smart Boards," to the 35 state-of-the-art laboratories, the teaching/learning experience is beyond expectations. Our second building is actually the beginning of TSU's Science and Technology Complex. With the world economies being driven by science and technology, TSU's Science and Technology Complex is expected to prosper well into the future. Indeed, COST is the only College at TSU to experience an increase in student enrollment over the past year. Last year, over 55% of all the external research funding at TSU was awarded to COST.

The COST Alumni Association is in its third full year of existence. The Association continues to recruit COST graduates and its membership is increasing. Recent graduates are offered free memberships. COST reached 100% participation in the Annual Faculty/Staff Fundraising Campaign again this past year.

Our primary mission is to bring to the students of COST the strongest educational experience possible and prepare them to fully participate in the marketplace upon graduation and assist in leading the world to a better place.

PAUL C. SIMMONS, P.E.
Chairman, COST Board of Advisors

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Code Enforcement

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Vision

The College of Science and Technology will become a leader among urban Universities in educating a diverse population in interdisciplinary sciences and contemporary technologies, preparing them for a competitive global economy.

Mission Statement

The College of Science and Technology at Texas Southern University is dedicated to integrating sciences and contemporary technologies, through education, scholarly activities, and community service; meeting the needs of a diverse graduate and undergraduate student population while addressing critical urban issues within a global economy.

Strategic Goals

Goal 1. Provide High Quality Instruction

1.1. Improve student performance in core education courses.

1.2. Promote and support innovative teaching and learning environment.

1.3. Secure and reaffirm accreditation and certification of all eligible programs.

1.4. Promote collaborative international education programs.

Goal 2. Perform Basic and Applied Research

2.1. Expand the scope of research and teaching, and thereby increase the amount of annual funding.

2.2. Increase the number of high quality scholarly and creative works generated by the faculty and by students.

2.3. Improve the incentive system for faculty teaching, research and service.

2.4. Promote interdisciplinary research.

2.5. Support entrepreneurship in research and technology transfer for commercialization.

Goal 3. Engage in Community Service

3.1. Develop and expand community outreach and public service programs.

3.2. Increase the number of continuing education units generated.

3.3. Promote involvement in and service to professional organizations.

3.4. Integrate service learning into the educational programs of the College.

Goal 4. Optimize enrollment of undergraduate and graduate students

4.1. Increase the number of college-ready incoming freshmen through outreach and recruitment.

4.2. Improve retention and increase 4-year graduation rates.

4.3. Increase graduate student enrollment.

4.4. Increase the number of international students in the College.

Goal 5. Strive for steady increase in external funding

5.1. Increase the funding from government, corporate and philanthropic organizations.

5.2. Increase alumni and friends giving.

5.3. Increase funds to support scholarships and endowments.

Goal 6. Ensure Efficient and Effective Administration

6.1. Ensure transparency in decision making and allocation of resources.

6.2. Enhance the College's aesthetics.

6.3. Integrate information technology into the management of the College.

Spearman Technology Building Dedicated to the College of Science and Technology

A throng of friends of the College, alumni, students, faculty, and administrators gathered on February 19, 2014 to dedicate the Leonard H. O. Spearman Technology Building, in honor of the 6th president of the University. It was a moving ceremony with many speeches from all those who had a hand in making the building a reality.

The Spearman Technology Building was severely damaged and rendered unusable by the impact of hurricane Ike on September 13, 2008. It was demolished, and replaced by a new technology building with 107,791 square feet of space and the latest technology for instruction and research. The University continued this honor by maintaining the name of the new technology building as the Leonard H. O. Spearman Technology Building. The new and redesigned building houses six academic departments: Aviation Science and Technology, Computer Science, Engineering Technology, Industrial Technology, Physics, and Transportation Studies.

The science and technology programs once scattered in various locations around the TSU campus were consolidated in one location. This new facility hosts 35 state-of-the-art labs such as, a full-motion flight simulator lab, a vehicle emission testing lab, an air traffic control lab, a high performance computing lab, a Mini-TranStar lab, a driving simulation lab, a construction lab, two design labs, health and nuclear physics labs, a geotechnical/material testing lab, an environmental engineering lab, a wireless sensor networks lab, and various other engineering, physics, and computer science labs. In addition, the facility is home to a new Tier 1 University Transportation Center, the Center for Transportation Training and Research, and the new National Science Foundation Center for Research on Complex Networks.

President John Rudley provided an account of the challenges the

University had to overcome to achieve such a project at a time when the financial markets were under- reacting to the economy in recession. The building opened for classes in the spring semester 2014.

Ms. Kenyata Thomas, a junior in engineering technology, served along with Mrs. Eva Pickens, Associate V.P., Communications & Community Affairs as the co-mistresses of ceremonies. The platform guests included President Rudley, Board of Regents Vice Chairman Dionicio Flores, State Senator Rodney Ellis, Regent Samuel Bryant, and Regent Curtistene McCowan, Congressman Al Green, and Student Regent Faron Foy.

Many community leaders and dignitaries were in attendance. The Spearman family was present, as was the family of retired Professor Naomi Ledé.

Dr. Aladdin Sleem observed that a building is simply bricks, concrete, steel and glass, but this dedication transforms it into a sacred place where students and teachers gather for scholarship. The Leonard H. O. Spearman Technology Building will be a place for study and research for years to come.

Fall 2013 Program Assessment Workshop

Dr. Catherine Parsoneault presenting at the COST opening faculty meeting.

As part of the Fall 2013 Opening Faculty Meeting, the College of Science and Technology held a workshop titled “Closing the Loop: Improving Academic Programs using Assessment Findings.” The main goal of the workshop was to highlight the importance of program assessment not only as an accountability and accreditation requirement, but also as a very important tool for improving academic programs. The workshop had two sessions with two guest speakers who covered various aspects of the topic in each session.

The first session was titled “From the Ideal to the Real: How High-Impact Assessment Practices Can Benefit MY Program’s Success” and the speaker was Dr. Craig Morton, the Associate Director for the Office of Planning and Assessment at Texas Tech University. In his presentation, Dr. Morton highlighted the assessment life cycle and went through its various phases. He also addressed some of the concerns that are usually raised by some faculty members regarding assessment. Dr. Morton also shared some practical advice based on his experience as a member of the Office of Planning and Assessment at Texas Tech University.

The second session was titled “Value-Added Benefits to Assessment for Program Improvement” and the speaker was Dr. Catherine Parsoneault, the Associate Vice Provost for Planning and Assessment at Texas Tech University. In her presentation, Dr. Parsoneault started by explaining the differences between course assessment and program assessment to set the stage for the rest of her presentation. She presented the elements of an effective assessment plan and how it can be used to reflect the measure and report the effectiveness of academic programs. She also shared several assessment planning resources that are available publicly and can be used by program directors to develop an efficient assessment plan.

The workshop was well received by COST faculty members as well as several guests from outside the college who attended the workshop.

Reaccreditation of Technology Programs

The Departments of Engineering Technology, Industrial Technology, and Aviation Science and Technology went through re-accreditation process this year. The Department of Engineering Technology has received full re-accreditation for 6 years from the Accreditation Board for Engineering and Technology (ABET) for its Electronics Engineering Technology program.

Simultaneously, the Construction and Design programs in the Industrial Technology Department and the Aviation Science Management program in the Department of Aviation Science and Technology received reaccreditation with a 2-year report by the Association of Technology, Management, and Applied Engineering (ATMAE).

Accreditation is a peer-review process that requires comprehensive, periodic evaluations; a key element being the requirement that programs continuously improve the quality of education. Programs must set specific, measurable goals for students and graduates, assess their success at reaching those goals, and improve based on the results. The accreditation criteria are developed by technical professionals to assure every program meets the demanding standards that prepare graduates to enter their engineering professions.

The reaccreditation of these programs culminates a process of evaluation by faculty and staff that started six years ago. The final 18 months of that process included the preparation and submission of a comprehensive self-study report for the program under evaluation. This was followed by a campus visit by Program Evaluators. The re-accreditation extends for another 6 years.

Airline Pilot Program at Texas Southern University

During Black History Month, Texas Southern University, a historically Black University, was awarded its coveted Federal Aviation Administration Certificate approving its Private Pilot Ground School Course. This event is notable because TSU now has the only four-year, state-supported pilot program in Texas. The movement toward obtaining this Pilot Certificate began in December 2011. At that time, Black Airline Pilots from all over the country, most of them Texas Southern University Aviation Management graduates, flew to Houston on their own time to convince University President, Dr. John Rudley that this program is needed at Texas Southern, with results that will be seen all over the world. The inaugural class was held on June 2, 2014, and the Private Pilot License received at the completion of the course will be the first step toward becoming an airline pilot. For those who accept this challenge, “Welcome to the Millionaires’ Club.”

Texas Physics Consortium

Beginning in the Fall of 2013, the Physics program at TSU will begin a new chapter in its evolution towards becoming one of the top physics programs in the United States for the production of African Americans with B.S. degree in Physics. Through the visionary leadership of the TSU Administration, TSU-Physics has merged with seven other programs across the State to form the Texas Physics Consortium (TPC).

The composition of the TPC is TSU, Prairie View A & M University, Tarleton State University, TAMU-Commerce, TAMU-Kingsville, TAMU-Corpus Christi, Midwestern State University, and West Texas A&M University.The TPC will allow TSU-Physics to recruit and nurture exceptional undergraduates and provide them access to a much broader assortment of tracks in Theoretical and Observational Astrophysics, Medical Physics, and Nuclear Engineering, complementing the existing strengths in Mathematical Physics, Computational Physics, Environmental (nuclear) Health Physics, and Atomic and Molecular Physics. Upper level, third and fourth year, physics courses will be taught through an advanced, interactive, IT System, in real time involving all eight campuses.

Port Commissioner Visits TSU

Port Commissioner Theldon Branch, III visited students in the Maritime 424: Containerization and Modern Cargo Storage class to talk about his life as an entrepreneur and the opportunities for students who pursue careers in the Maritime industry. During his talk, Commissioner Branch talked about growing up across the street in the Cuney Homes Apartments and always being on the TSU campus, either in the library or just running around the campus.

After the presentation, the Maritime Student Association hosted a reception in the Commissioner's honor in the President's Lounge on the 4th floor of the Sterling Student Center. In addition to TSU Maritime students and faculty in attendance at the reception, other attendees included TSU President Dr. John Rudley, COST Dean Dr. Lei Yu, Department of Transportation Studies Chair Dr. Yi Qi, TSU Associate VP for Communications and Community Affairs Eva Pickens, TSU Executive Director for Development Carolynne Oliver, Port of Houston Authority VP for Small Business Gilda Ramirez, and Port of Houston Authority Maritime Program Coordinator Linda Clary.

Established in Fall 2010, the Department of Transportation Studies offers a Bachelor of Science degree in Maritime Transportation Management and Security.

SUNY Maritime College Visits TSU

Earlier this year, TSU Maritime Transportation Program established a relationship with one of the most prestigious colleges in the United States of America for maritime education- State University of New York (SUNY) Maritime College. The Director of Graduate Admissions from SUNY Maritime College Mr. Alexander Bodeham recently visited with TSU Maritime Student Association members to discuss maritime graduate program options at SUNY Maritime College. Mr. Bodeham invited TSU Maritime students to attend their annual job fair in New York which attracts over 300 companies.

Career and Job Fair

A Maritime, Transportation, and Engineering Career and Job Fair was hosted by the Department of Transportation Studies in partnership with the Office of Career Placement and Department of Engineering Technology.

The purpose of the event was to train students in resume writing and expose them to employers with opportunities that match their specialized degrees and training. Employers in attendance included: Exxon Mobil, City of Houston, Port of Houston Authority, U.S. Customs and Border Protection, NASA, PLS Logistics, and the State of Texas Alcohol and Beverage Commission. Students had an opportunity to network with human resources representatives from these companies in a relaxed yet professional environment.

COST Faculty and Staff Retreat

The COST faculty retreat was held on August 9, 2013 at the Crowne Plaza Medical Center to consider retention and progression issues of students. The major theme was "how to create the successful STEM student."

The guest speaker, Dr. Leonard Burge, Dean of the College of Engineering at Tuskegee University, discussed mathematics as the basic tool at the heart of engineering and all STEM fields. He claimed that we are losing the future workforce due to a mindset that certain demographics are unacceptable for the Engineering field (e.g. African Americans, Hispanic Latinos, and Native Americans). He also claimed that unless we produce at least 10,000 engineers more per year over the next 5 years (a mandate made by President Obama), we will be facing a matter of national security.

Dr. Oscar Criner provided the "kickoff" for the brainstorm session with a charge to change in the presentation of science and mathematics that would motivate student learning by showing knowledge as an interrelated whole and not simply a series of isolated facts and procedures. He suggested that students be shown the interconnectedness of all science by presenting courses using the structure of logical systems upon which all science is based. Each department chair then spoke about goals, expectations, and obstacles that they specifically face.

The College of Science and Technology held its very first Staff Retreat at the Crowne Plaza Reliant Park/Medical Center on Friday, July 12, 2013. The theme: "Progress Through Teamwork" focused on customer service and collegiality, as well as an overview of registration and a true colors training workshop.

COST Open House: An Exciting Community Affair

The COST community gathered for the 5th Annual Open House: Alumni and Partnership Luncheon on Thursday October 17, 2013. The atrium of the TSU Science Center was brightly decorated in the spirit of Homecoming for the gathering of alumni, partners, friends, students, faculty and staff for our annual College show and tell program. Guests reviewed research posters and networked with students, faculty, and alumni before settling down to lunch.

Dr. Oscar H. Criner opened the program with a talk on the theme of the program, "Creating the Successful STEM Student," where he discussed the activities of the College in helping students adjust to college life. There was a major orientation for freshmen, pointing out to students the challenges and pitfalls for those attending college for the first time. Dean Lei Yu gave a "State of the College of Science and Technology" presentation that was a report of annual activities.

This year the Partner of the Year was the Houston Airport System (HAS), which has been actively involved in the COST Airway Science program for many years. Thirty-six students have participated in the HAS-TSU internship program up to the present. Sixteen TSU graduates have professional positions with the HAS. Mario Diaz, the director of HAS, accepted the College's Partner of the Year Award on behalf of the HAS.

COST students described their personal experiences as to the path that led them to study in the College. The COST Board of Advisors perspective was delivered by the Chairman, Mr. Paul Simmons, who gave remarks as to the activities of the Board of Advisors in its advocacy for the College. Similarly, the COST Alumni Association Chapter's activities were described by their Acting President, Mr. Perry Miller.

Dean Yu introduced the Keynote speaker Dr. Mark Dean, who is Fisher Distinguished Professor at the University of Tennessee, College of Engineering. His presentation surveyed "Emerging Areas of Innovation and Opportunity."

Homecoming 2013: Proud of our Stripes

The Homecoming Alumni Activities were organized from Wednesday, October 16 through Saturday, October 19, 2013. The Grand Tiger Parade was held on October 19 in Downtown Houston.

The College of Science and Technology is quite excited to report that it placed in every division of competition it entered in the 2013 Homecoming at Texas Southern University. This year's theme was "Proud of our Stripes."

In the campus-wide Decorating Competition, COST Dean's Office received a First Place award in the Office Suite and Door decorations category. The COST Student Services Office received a Second Place award in Office decorations. In the Parade Competition, COST received a First Place award in the Float competition and a Third Place award in the Walking Unit competition.

Dean's Student Advisory Council Town Hall Meeting

The 2014 College of Science and Technology Dean's Student Advisory Council Town Hall Meeting was a successful event. A host of students, faculty and staff were in attendance on April 16, 2014 for the meeting. A representative from each department within the College was present to address all of the students' questions and concerns.

Members of the Dean's Student Advisory Council and Student Ambassadors hosted the event. Students attending the meeting received a complimentary lunch in exchange for completing a short survey with questions aimed at identifying student motivations surrounding retention issues. There will be a full report on the survey given to the Dean of the College later this summer.

Each student was given the opportunity to fill out a comment/ question card or to step up to the microphone to speak. Department Chairs responded to the questions or comments.

The goal of the meeting was to assure the students that their voices would be heard and student's voices were indeed heard.

Saluting the COST Super Stars:
Administrative Professionals Appreciation Luncheon

The COST honored its staff for their exemplary contributions and service to the College at a luncheon held Wednesday, April 23, 2014 in observance of Administrative Professionals Day. Our staff has worked tirelessly to accomplish the objectives, goals and mission of the College. COST staff continues to represent the College with the highest standards of excellence and dedication to students. We salute and appreciate our staff for a job well done.

COST Freshman Orientation

The College of Science and Technology held a successful two-day Freshman orientation which was held on August 19-20, 2013 in the New Science Building. Incoming COST students had an eventful orientation day #2 beginning with discussions with Chairs, Faculty, and students from their major departments.

The morning discussion was followed by a pizza lunch during which Drs. Holmes, Rosenzweig and Criner engaged students in a motivational conversation on college success and the tools of the trade to do well over the next four years. Afternoon sessions included “How to use Blackboard for Academic Success” hosted by Dr. June Claiborne of TSU COLEIT. Students had the chance to ask questions about resumé preparation, employment opportunities, internships, and fellowships in the session hosted by the Office of Career Planning and Placement facilitated by Dr. Antoinette Roberson and Mr. David Olagbaju.

Dr. Shayna Lee, Director of the Counseling Center and staff members, (Ms. Sharon Benavides and Ms. Bernadette Smith), gave information on “Transitioning to College Life” and how the TSU Counseling Center can help real people with real problems obtain real solutions. The office of Student Financial Assistance gave an overview on “How to Pay for College” and how Satisfactory Academic Progress (SAP) can affect students facilitated by Mrs. Brandi Weber and Ms. Latisha Marion.

Ms. Corliss A. Rabb, Director of Judicial Affairs, spoke to students about the importance of adhering to the Student Code of Conduct in the session titled "Keeping you Safe: TSU Student Code of Conduct."

Ms. Vera McDaniels from the Science and Technology Enhancement Program (STEP) presented “Got Scholarships? Interested in Research?” All incoming students received a T-shirt emblazoned with the slogan "COST Students Got Class".

The college wishes to thank all the presenters and facilitators for their help in making this experience a great one for our freshmen. The college also wishes to thank our COST Ambassadors and COST Dean's Student Advisory Council for their support.

COST 101 Mandatory Freshmen Academic Information Meetings

Beginning in the fall 2013 semester, the College of Science and Technology (COST) Office of Student Services and Instructional Support (OSSIS) developed a COST 101: Freshmen Meeting as a part of the College's goal to promote student success, persistence and retention. Because many students enter college not fully knowing all it entails to be successful in college, this course was designed to help bridge the gap between the skills the student brings to college and what they need to know to be successful (academic skills vs. the non-academic skills.)

On the fourth Wednesday of each month, the OSSIS team hosted the COST 101: Freshmen Meeting focusing on different topics that entering students need to be aware of in order to be successful.

Topics included adjusting to college life; time management; how to study/note-taking strategies; creating a study pact; general education requirements; career planning; and other campus resources to name a few. This project was spearheaded by Ms. Evangeline Pearson, Dr. Desirée Jackson and Dr. Oscar Criner. The team tailored COST 101 topics to meet students' needs keeping in mind each stage of a freshman's first semester experience and coupled with academic issues of importance within a particular month, for example, preparing for midterm examinations.

As an incentive, the COST offered Barnes and Nobles Bookstore gift cards to encourage the 299 first time freshmen to attend. During the meetings students were encouraged to share their experiences and challenges.

Students who were doing well at midterm were commended for their efforts. As the meetings grew in popularity, more than just the incoming freshmen attended. Topics were expanded to include topics of interest not just relevant to first time freshmen, but also to first time transfer students, and new post-baccalaureate students studying in COST.

OSSIS continued to offer the COST 101 Freshmen meeting during the spring 2014 semester as a continuation for freshmen and other students. The final COST 101 meeting of the semester concluded on April 23, 2014. Over 283 students have attended COST 101 over the course of the fall 2013 and spring 2014 semesters.

COST 101 TOPICS

Financial Aid and you: SAP and the Lifetime Cap

Information Literacy and E-Books

How We Can Help: TSU Counseling Center and Office of Disability Services

Using the My TSU Web and Blackboard

Study Skills and Time Management

MIDTERM MADNESS | FINAL FRENZY

In an effort to increase persistence and completion rates among students, the College of Science and Technology in collaboration with the Health Occupations Students of America (HOSA) student organization and the College of Pharmacy and Health Sciences (COPHS) hosted the first Midterm Madness event on Monday, October 7, for students focussing on the areas of Math, Biology, and Chemistry.

The purpose of the event was to encourage COST and COPHS students to study for midterms, receive extra help with perceived difficult subject areas, as well as to offer an extended/additional quiet time and place for studying within a warm and inviting atmosphere. Over 96 students ranging from freshmen to seniors participated in the Midterm Madness study session in the Atrium of the New Science Building from 6:00 pm to 11:00 pm. SGA President and student leaders Leon Spencer, Fred Carter, and HOSA President, Chi-Tam Nguyen, were on hand to assist students and offer support.

Students were engaged as they studied and shared information while they prepared for mid-term examinations. Instructors and tutors shared their knowledge through individual and group sessions designed to help students become better prepared for their midterm examinations all while enjoying generous refreshments and coffee.

Encouraged by the success of the program, COST hosted a “Final Frenzy” study session for students on December 4, 2013.

The College of Science and Technology Office of Student Services and Instructional Support (OSSIS), along with its partners, the College of Pharmacy and Health Sciences, Student Academic Enhancement Services Tutoring Office, and the Health Occupations Students of America hosted the Spring Midterm Madness on March 3, 2014 and the Final Frenzy Study Hall on April 30th from 5:00 pm to 10:00 pm in the Science Building Atrium. The Final Frenzy event drew over 106 students which is the largest audience since its inception in the fall 2013.

Students of all disciplines attended Final Frenzy to receive extra assistance for final exams through tutoring, student groups, and/or meeting with professors.

Midterm Madness and Final Frenzy were created with these students in mind to provide extra help. Upon arrival to the event, students are placed at study tables/groups with students needing help in the same course. This form of placement allows students to begin to interact with other students, share ideas and meet others from their class or major. It is our hope that this method will contribute to student retention through the use of student study peer groups and small groups sessions led by an instructor(s) outside of the classroom.

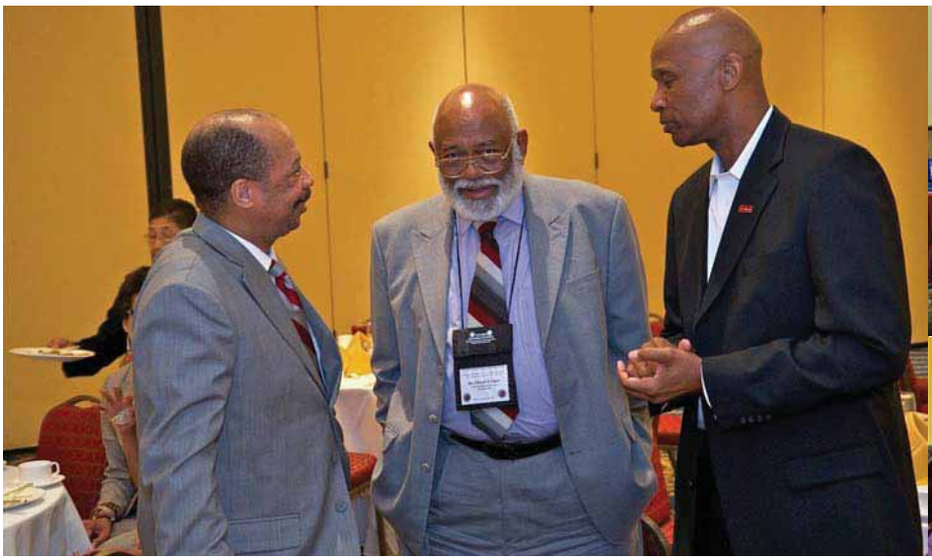
Many professors and teaching assistants from COST participated to help give students the extra boost and study assistance they needed to do well on their finals.

NSF CREST External Advisory Board Meeting

The External Advisory Board (EAB) meeting of The NSF CREST Center for Research on Complex Networks at TSU was held on May 2, 2013. Eight EAB members attended the meeting. The EAB Chairman Dr. Wei Zhao (Rector of University of Macau) called the meeting to order at 9:00 am and then TSU Provost, Dr. Ohia and COST Dean, Dr. Yu expressed their warm welcome to all EAB members on behalf of TSU and the College. Center PIs, Co-PIs, and Directors of Education and Technology Transfer reported their activities to the EAB members. This year's EAB keynote speaker was Dr. Hesham Rahka who is a Professor and the Director of Center for Sustainable Mobility at Virginia Tech who presented his research achievement in transportation sustainability and intelligent transportation systems. The six research presentations from faculty and students, as well as over 20 research posters attracted many attendees' attention. During the last academic year, the Center team members have published over 25 journal publications and 59 conference publications, and have been actively working as PIs on about $3 million in additional research grants from NSF, NASA, Army, Qatar, US DoT, Texas DoT and Southwest Region University Transportation Center. At the end of the meeting, the EAB members expressed their satisfaction regarding the Center's current performance and also shared their comments on future development of the Center.

CREST Technology Transfer Summer Workshop

The Technology Transfer Unit of TSU CREST hosted a one-day Summer Workshop on July 24, 2013. The purpose of the workshop was to provide TSU community members with an introduction to technology transfer and an understanding of how technology transfer intersects various efforts in intellectual property (IP) and commercialization within the CREST Center. The workshop was designed to provide concrete examples and best practices in technology transfer as it directly relates to laboratory researchers in their everyday roles. Participants obtained interesting and meaningful exposure to intellectual property, technology transfer and commercialization topics through sessions and case studies taught by TSU research leaders and individuals from the greater Houston commercial-ization community.



CREST TLEC International Conference

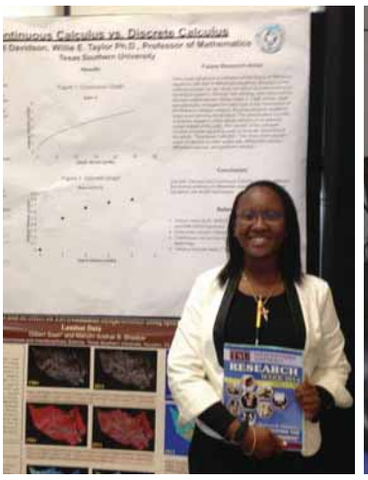
International Trends in Evidence-Based Research, Teaching, and Learning

The CREST Center for Research on Complex Networks Center (CRCN) at TSU, together with TSU Teaching and Learning Excellent Center (TLEC), co-organized the 2014 Annual Conference on Teaching, Learning, and STEM Education at Texas Southern University. TLEC and CRCN both have major common goals that are focused on the success of the education enterprise.

The primary function of the TLEC is to promote a culture of excellence in teaching and learning. The goals of the education program in CRCN are to increase the constituent pool of secondary school students willing to study STEM subjects; to increase the numbers of African American, Hispanic, and other minority students who choose to study STEM subjects; to enhance the educational achievements and research experiences of participating undergraduate and graduate students; and to significantly increase the numbers of students undertaking doctoral level study in STEM fields. This conference has successfully provided an opportunity for all of the stakeholders in the education enterprise to gather and discuss their common interests and issues. The conference theme "International Trends in Evidence-Based Research Teaching and Learning and STEM Education" reflects a worldwide concern for scientific research in education and the development and implementation of effective pedagogy at all levels of the enterprise.

As society moves deeper into an era of pervasive technology, all facets of human endeavor will be affected, so that the need for the implementation of new knowledge, the development of human capital, and the improved capacity of citizens to interact fully with the developing knowledge based society is essential for the well-being of all citizens. This conference has also provided an opportunity for all attendees to enhance their practice, gain new skills, and connect with colleagues from around the country, and, most importantly, take these resources back to attendees' schools, colleges, universities and the students for implementation.

Dr. Oscar H. Criner, the Director of Education in the CREST Center, together with Dr. Bernnell Peltier-Glaze, the Interim Director of TLEC at TSU made a huge effort in organizing the conference and in making the conference successful. TSU President Rudley met with the speakers to discuss the current status of TSU Teaching, Learning, and STEM Education and its future development.



COST Research Week
Big Data and Interdisciplinary Approach

The College of Science and Technology successfully organized a one day Research Week Program on Thursday, April 3, 2014. The program was very well attended by faculty and students alike resulting in a near-capacity crowd.

Dr. Sriram Iyengar, Associate Professor at the School of Biomedical Informatics at the University of Texas Health Science Center-Houston, was the keynote speaker who delivered a research seminar entitled, “Meaningful Interdisciplinary Research and its Impact.” Dr. Iyengar described how a similar interdisciplinary approach between engineering and mathematics has revolutionized computer animation and the entertainment industry.

Following Dr. Iyengar’s presentation, the program transitioned into its panel discussion segment entitled “Technological Advances in Science and Technology and Job Market trends.” Panelists included: Dr. Narendra Gosein, Senior Principal in the Structural Diagnostics Services Group of Walter P. Moore; Dr. Sriram Iyengar, Associate Professor of Biomedical Informatics at UT Health Science Center Houston; Dr. Jonathan Silberg, Associate Professor in Biochemistry & Cell Biology/Bioengineering at Rice University; and Dr. Daniel Vrinceanu, Assistant Professor of Physics at Texas Southern University. The panel was moderated by Dr. Lila Ghemri, Chair of the COST Research Committee.

TSU Students Participate in SpaceX3 Launch

The College of Science and Technology students in the Biology Department led by their mentor and lead principal investigator, Dr. Alamelu Sundaresan, participated in the SpaceX3 launch on April 18, 2014 at the Kennedy Space Flight Center. The three students representing Texas Southern University: Ivory Ellis, Elvis Okoro, and Olivia Madison were part of the University Research (UR) 1 - Investigation of Countermeasures to Modulate and Augment the Immune System project. The study uses a newly synthesized compound which was found to enhance immune cell response in microgravity. The samples were studied aboard the International Space Station (ISS) for 30 days and returned on May 19, 2014. Genetic and protein analysis is currently being conducted on the samples.

Emerging Researchers National Conference 2014

Faculty members and students of the Center for Research on Complex Networks (CRCN), and the Departments of Chemistry and Computer Science attended the 2014 Emerging Researchers National (ERN) Conference in STEM organized by the NSF from Feb 20-22, 2014 in Washington DC.

The ERN Conference 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. 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.

Faculty members shared their experience and comments with NSF Program Directors and other University's leaders in helping undergraduate and graduate students to enhance their science communication skills and to better understand how to prepare for science careers in a global workforce.

LSAMP scholars Ms. Larnesia Caulfield, chemistry major, Ms. Raven Reed, chemistry major, and Mr. Richard North, computer science major participated in the ERN oral and poster presentations. Student presentations received valuable comments from attendees. The students were accompanied by Drs. Bobby Wilson, Wei Li, Xuemin Chen and Ms. Michelle Tolbert.

SETAC Annual Meeting

Three graduate students, Sharmila Bhandari, Taofeek Olonode, and Djene Keita, and their advisor Dr. Hyun-Min Hwang in Environmental Toxicology Program attended the Society of Environmental Toxicology and Chemistry (SETAC) South Central Regional Chapter Annual Meeting that was held at University of Houston, Clear Lake campus, May 31-June 1, 2013. Students discussed various environmental issues and modern research skills and techniques with other participants from South Central regions. Sharmila Bhandari, Environmental Toxicology Ph.D. Candidate received a travel grant from SETAC to attend the 34th North American Annual Meeting in Nashville, Tennessee, November 17-21, 2013. She is one of the 50 recipients selected from applicants worldwide. She presented her recent research findings regarding "High Molecular Weight Polycyclic Aromatic Hydrocarbons in Cigarette Smoke and Pine Needles."

Technical Training on Smart Eyes and MAPPS

Faculty and graduate students in the Department of Transportation Studies received a technical training from the manufacturer on the use of the Smart Eye system during the week of October 22, 2013. The Smart Eye system can be easily embedded into the Driving Simulators or even real vehicles to capture the gaze positions, pupil movements, and eye blinking while driving. The data obtained can be promptly processed by using the software MAPPS.

Training on use of MOVES

Dr. Mehdi Azimi, a post doctoral research associate in the Department of Transportation Studies, conducted a series of trainings for graduate students on the use of the Environment Protection Agency (EPA) approved new emission estimation model MOVES. The trainings included three lectures on the estimation of emissions at national, county, and project levels, respectively.

CTTR Creates Environmental Justice Methodology

In May 2013, the Center for Transportation Training and Development (CTTR) staff completed an Environmental Justice methodology for the local metropolitan planning organization (MPO), the Houston-Galveston Area Council (H-GAC). The study involved a three-part approach which 1) examined EJ variables used by peer MPOs, 2) created an EJ methodology for H-GAC, and 3) applied the EJ methodology using 2010 Census and 2011 American Community Survey (ACS) data to determine EJ zones by census tracts. H-GAC will use this methodology and the resulting EJ zones identified as it updates the 2040 Regional Transportation Plan.

CTTR Research on Women in Construction

The Center for Transportation Training and Research conducted a community service project entitled 'Women in Construction.' The project's focus was to increase the number of women available to work in highway construction jobs. Funded by TxDOT and directed by Khorso Godazi, 22 women, whose primary focus was to obtain a career in the industry, were involved in the program which lasted for four weeks beginning at the end of May and concluding in June. Godazi went to the Workforce Commission and local churches to select women for the program.

At the end of the program was a graduation ceremony attended by 14 employers who provided information on positions in their specific highway construction areas. TSU President, John Rudley and Ron Wilson, Director of TxDOT's Civil Rights division attended the ceremony.

National Science Foundation
Research Infrastructure in Science and Engineering

The National Science Foundation (NSF) announced a Research Infrastructure in Science and Engineering (RISE) award of $991,206 over 3 years to Texas Southern University to support its proposed research on Characterization of Biomolecular Response to Environmental Stress.

The multi-disciplinary team, led by Drs. Shishir Shishodia (PI), Jason Rosenzweig (Co-PI), Daniel Vrinceanu (Co-PI), and Hyun-Min Hwang (Co-PI) represent 3 different departments in the College of Science and Technology: Biology, Physics, and Environmental and Interdisciplinary Sciences. Investigators will engage in basic research 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. The environmental toxicology program will be strengthened by providing financial support to minority students. A mentoring initiative for graduate students to support their course preparation, effective teaching and learning, grant writing, and research will be developed. One of the major objectives is to embrace the K-12 community and undergraduate students through summer internship programs to advance research-based learning experiences and motivate them to pursue advanced degrees in STEM fields.

Research Grant from Texas Department of Transportation

The College of Science and Technology received a new research project from Texas Department of Transportation (TxDOT) to quantify the vehicle emissions associated with different pavement conditions: flexible pavement, continuously reinforced concrete pavement, and jointed concrete pavement. The project will be jointly conducted by researchers from the University of Texas at El Paso and Texas Southern University. Dr. Lei Yu and Dr. Fengxiang Qiao will lead the effort at Texas Southern University for this two year project. The product from this project will assist TxDOT in improving maintenance strategies to reduce emissions.

2014 Department of Homeland Security Scientific Leadership Award

The Department of Homeland announced its 2014 Scientific Leadership Award to TSU. This grant is highly competitive, which is awarded to accredited Minority Serving Institutions for building their Homeland Security Science, Technology, Engineering and Mathematics capabilities, establishing related curricula and courses of study, supporting the development of early-career faculty, and recruiting and mentoring students.

The TSU proposal titled “preparing Technically Savvy Homeland Security Professionals for Maritime Transportation Security” was selected for this award this year. The PI of the grant is Dr. Yi Qi. Co-PIs include Dr. Miao Pan and Dr. Yunjiao Wang. This is a five year grant with a total funding of $800,000. At current stage, the funding for Phase I (FY 2015 and 2016) in the amount of $300,000 was approved and the funding for Phase 2 will be subject to the satisfactory progress of Phase I.

It is the first time that TSU won this award from DHS and it will foster and broaden our existing B.S. level program in Maritime Transportation Management and Security, and enhance the interdisciplinary collaborations between different departments in the College of Science and Technology.

National Science Foundation Research Initiation Award:

Dr. Bhaskar Receives NSF RIA to Study Mercury Pollution in the East Tennessee Watersheds

The National Science Foundation (NSF) announced a Research Initiation Award (RIA) of $199,999 over 2 years to Dr. Maruthi Sridhar Balaji Bhaskar of Department of Environmental and Interdisciplinary Sciences at Texas Southern University to support his proposed research on “Spatial and Temporal Modeling of Mercury Fate and Dynamics in Tennessee Watersheds.” The goal of the project is to develop a comprehensive understanding of the landscape factors on mercury loading and distribution in the East Tennessee Watersheds of the Oak Ridge Reservation (ORR).

The team of graduate and undergraduate students from TSU, led by Dr. Bhaskar (PI) will collaborate with scientists at Oak Ridge National Lab (ORNL) to understand the trends of mercury contamination and bio-accumulation in the fish of East Tennessee.

Over the past several decades, substantial environmental and ecological changes have occurred in selected east Tennessee streams in the southeastern United States that has received historical pollutant discharges from the US Department of Energy’s (DOE) Y-12 National Security Complex (Y-12 NSC). One of the most prevalent contaminants released was mercury, a significant environmental pollutant due to its persistence in the environment, ability to bioaccumulate in food chains, and its known hazards to both humans and wildlife. The transformation, bioaccumulation and health effects of mercury are subjects of intensive investigation.

The project will enhance the research experience and training of undergraduate and graduate students at TSU. The project will provide financial support for undergraduate and graduate students at TSU, train them in state-of-the-art geospatial techniques and enhance collaboration and internship opportunities with national labs such as ORNL. Dr. Bhaskar has an ongoing collaboration and served as a Visiting Faculty during the summers of 2013 and 2014 at ORNLs’ Environmental Division as a result of two successful Visiting Faculty Grant awards. The Visiting Faculty Grants are awarded by DOE to university faculty to collaborate with DOE laboratory research staff on research projects of mutual interest.

National Science Foundation CAREER Award: Dr. Miao Pan

The National Science Foundation (NSF) recently announced a CAREER award of $430,002.00 over five years to Texas Southern University in support of Dr. Miao Pan, an Assistant Professor in the Department of Computer Science (CS) at the College of Science and Technology (COST), for his research proposal “CAREER: SpecMax: Spectrum Trading and Harvesting Designs for Multi-Hop Communications in Cognitive Radio Networks.”

The awards are the most prestigious offered by NSF’s CAREER Program and provide up to 5 years of funding to junior faculty members who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research within the context of their organizations’ missions. Dr. Pan is the first faculty member at TSU to have received the NSF CAREER Award. Dr. Miao Pan was awarded for his research on spectrum trading designs in cognitive radio networks, which is promising to relieve the spectrum tension due to wireless services’ booming growth, improve spectrum utilization and facilitate spectrum trading with enormous economic benefits. His project is focused on designing a novel CRN architecture to facilitate the spectrum trading, and developing novel computer algorithms to extend spectrum trading for multi-hop cognitive radio communications and harvest spectrum under spectrum uncertainty.

Dr. Pan's interdisciplinary approach brings together computer science, electrical engineering, statistics, and economics. The results of this project can advance the state of the art in spectrum trading designs and enrich the scientific knowledge of network designs and network economics. As part of this project, Dr. Pan will provide research opportunities to both undergraduate and graduate students. Dr. Pan has also been working as a principal investigator (PI) for another NSF supported project “EARS: Collaborative Research: Cognitive Mesh: Making Cellular Networks More Flexible” at TSU, and been working as a faculty investigator for NSF Center of Research Excellence in Science and Technology (CREST) at TSU. Dr. Pan’s research spans over cognitive radio networking and communications, cybersecurity, and cyber-physical systems.

The Houston Louis Stokes Alliance Program Funded for Phase IV

The National Science Foundation (NSF) funded the phase IV of the Houston Louis Stokes Alliance for Minority Participation (H-LSAMP). The program will be co-led by Dr. Bobby Wilson (Texas Southern University) and Dr. Stephen Seidman (Texas State University). The Alliance is comprehensive, including the country’s largest school districts, two community college systems, and several comprehensive/doctoral Historically Black College/Universities and Hispanic Serving Institutions.

The H-LSAMP Senior Alliance will fund new efforts in student transition, student support mechanisms for students taking non-traditional courses, the inclusion of social support mechanisms into STEM retention, and the institutionalization of best practices developed during earlier LSAMP funding.

The Houston LSAMP has been a highly successful program. During the first five years of funding, the program nearly doubled the number of underrepresented minority students earning a degree in a STEM field. It maintained that level of production in the second phase of funding, and has emerged as a role model and mentor institution for other LSAMP programs at colleges and universities across the nation.

ITC Business and Education Mission to China

Dr. Lei Yu, Dean of the College of Science and Technology, joined the International Trade Center (ITC) Business & Education Mission to China on April 13-22, 2014. The mission was led by the Honorable Congressman Al Green.

One purpose of the mission was to promote and establish long-term cultural and educational exchanges between the U.S. and China's leading institutions of education. Dr. Roger Hart, the Director of TSU Confucius Institute, was also a member of the delegation.

As part of the mission activities, the delegation had the opportunity to visit Beijing Jiaotong University, Confucius Institute Headquarters, and to meet leaders of a number of other institutions in Beijing, Tianjin, Shandong, Xian, and Shanghai.

The mission was extremely productive and successful, and provided great exposure for TSU and its programs to various international collaborators.

TSU-Brazil Alliance

In March of 2011, President Obama entered into an agreement with the President of Brazil under which it was agreed to develop a closer relationship among HBCUs and Brazilian institutions of higher education. The HBCU-Brazil Alliance, of which TSU is a member, was formed to further the objectives of the presidential agreement. COST hosted five Brazilian students during fall 2013.

Monica Borges Ruckhaber is majoring in Computer Science. She enjoys the logical and creative aspect of the field. Frederico Novak, a dreamer, is enticed towards the logic in the area of Computer Science.

Luan Fonseca de Medeiros, a resident of Natal, Brazil, is majoring in petroleum engineering and civil engineering. He chose TSU because of its location in Houston, Texas that is home to several oil and gas companies. He is excited about the idea of working on rigs in the sea. He looks forward to doing an internship with a petroleum company next summer.

Patricia Siqueira Pinheiro is 23 years old and a civil engineering student. She is fascinated by the field of structures, but her plans are in the field of building materials. She is driven by an idea of creating diverse recycled materials to produce reusable construction materials. João Luiz entered Texas Southern University through the Brazil Scientific Mobility Scholarship Program (BSMS). He has one year here to get to know more about America and Texas. He has a fascination for food, travel, and automobiles. He is an automotive engineering undergraduate student in Brazil.

Visiting Scientists from Nigeria

Three scientists from the Department of Veterinary Pharmacology at the University of Ibadan, Nigeria visited Dr. Momoh Yakubu's laboratory in the College of Science and Technology.

While at TSU, they were engaged in research designed to determine the anti-proliferative and anti-inflammatory properties of herbal plants from Africa. They were also involved in method development for use in the determination of the constituent alkaloids in the plant products. These scientists, Dr. Adeolu Adedakpo, Dr. Tayo Omobowale, and Dr Oyagbemi Ademola Adetokunbo are interested in conducting research in the area of cardiovascular diseases and toxicology.

During their visit Dr. Oyagbemi Adetokunbo also gave seminar at the Environmental Toxicology Program Seminar series entitled: Failure of recovery from lead acetate-induced hepatotoxicity in Wistar rats: The role of free radical generation and depletion of antioxidant defense system.

Visiting Student from Australia

Mr. Sicong Zhu from University of Queensland in Australia is visiting the College of Science and Technology in the position of visiting Student Doctorate. He is conducting a research project sponsored by the NSF CREST. He will assist in the research on the subproject Urban Transportation Environmental Networks (UTEN) under the supervision of Dr. Lei Yu.

Health Occupation Students of America

The Texas Southern University Chapter of HOSA (Health Occupations Students of America)-Gamma Eta Rho chapter competed at the National HOSA Conference held in Orlando, Florida June 24 – 29, 2014 and won honors for the university.

The students who participated were: senior Chi-Tam Nguyen, junior Tommy Quach, senior Autumn Pitre, and freshmen Benjamin Caballero and Tam Nguyen. With over 8,000 members in total and over 700 post-secondary/collegiate members from across the US, TSU-HOSA members studied diligently and faced fierce competition in events such as Sports Medicine, CPR/First Aid, Dental Terminology, and Medical Photography. Members also participated in health-related workshops such as designing a prosthetic arm, building clay models of human organs responsible for gas exchange, and interactive exercise related to respiratory care and the human brain.

TSU-HOSA Chapter competed against prestigious universities such as the University of Hawaii, New York University, University of Texas at Austin, and Unversity of California in Los Angeles (UCLA). Furthermore, members competed against professionals who were EMTs, CPR instructors, National HOSA photographers, nursing students, and Sports Medicine Trainers.

All TSU HOSA members were finalists in their competitive event, with one member, Chi-Tam Nguyen, placing second in Sports Medicine and place in the top 10% of the healthcare issue exams. In addition, TSU-HOSA members, Tommy Quach, Chi-Tam Nguyen, and Autumn Pitre received the Barbra James Service Award for their devotion to giving back to the community.

This was the first time the TSU-HOSA Chapter has competed at nationals and, they are looking forward to more accomplishments for the next academic year.

The TSU HOSA delegates were accompanied by their advisor, Dr. Hector C. Miranda, Jr., Associate Professor in Biology and Interim Assistant Dean of the Thomas F. Freeman Honors College.

The TSU Chapter of HOSA would like to thank Dean Lei Yu, Interim associate Dean, Dr. Shishir Shishodia, Biology Department Chair, Dr. Warren Williams, Biology Assistant Professor, Dr. Ayodotun Sodipe, and Dean Humphrey Regis of the Thomas F Freeman Honors College for their unwavering support.

National Society of Black Engineers: TSU Chapter

Texas Southern University chapter of the National Society of Black Engineers had a record-breaking sixteen students attend the annual national convention that was held in Nashville, Tennessee from the March 26-31, 2014. The trip was sponsored by the College of Science and Technology.

Students were exposed to professional engineers at the Career Fair who gave them advice on improving their resumes to stand out from all the other students. A number of students had interviews with major companies. One student was offered a summer internship. Other students have received follow up email or phone calls from employers. A recruiter from Toyota expressed interest in recruiting students from TSU to increase diversity in that company. John Shoboiki, participated in a raffle held by Eastman Chemical Company and won $1000 for the TSU chapter of NSBE.

Intelligent Transportation Society

Led by faculty advisor Dr. Fengxiang Qiao, 14 graduate students from the Intelligent Transportation Society (ITS) TSU student chapter attended the ITS Texas annual meeting from November 19-20, 2013 in Houston, and undertook assigned volunteer work for the event. Four members (President Qing Li, Enyu Li, Jie Liu, and Qun Zhao) received ITS scholarships ($1,000 each), and the ITS Chapter received a $500 stipend from ITS Texas. The TSU Chapter is one of two student chapters in Texas; the other is at the University of Texas at Austin. The picture shows TSU attendees with the ITS Texas Board of Directors during the award luncheon held on Nov 20, 2013.

TSU Maroon Tails

The 25th Annual International Women in Aviation (WAI) Conference was held from Thursday, March 6 through Saturday, March 8, 2014, in Orlando, Florida's Disney's Coronado Springs Resort.

The students were immersed in the tactics and strategies essential for successful aviation careers. Chapter members in attendance were Sharon Hudson, Chapter Founder and Advisor, Stephanie Fagan, President, Marco A. Gonzalez, Membership Chair, Edward Williams; Web Developer/ Community Relations Chair, Tatiana Williams, Treasurer; Orlan Washington, and members Samyria Bennett, Delecia Holmes, Lydia Ndagire, and Nezabian Thomas.

Additionally, the TSU Maroon Tails Chapter is featured in the current Women in Aviation International magazine for their community service during the "Wings Over Houston Air Show," October 25-27, 2014.

CRCN STEM ENCHANTMENT III:

Summer Students Learn Mobile App Development

The Center for Research on Complex Networks sponsored the 2014 STEM Enchantment III summer program. The program introduced middle and high school students to programming on the desktop and on Android tablets. This four week program taught students the basic fundamentals of computer science through gaming using Microsoft Visual Basic for Applications (VBA) for desktop application development and the MIT App Inventor for creating applications for mobile Android tablets.

Students developed games and other applications for the desktop using VBA. This development environment is on almost every PC with the MS Office suite and is available to most students who have PCs at home. The MIT App Inventor development environment is used to create games and apps on Android devices and is available to the students at home if they have a PC and an Internet connection. Students will be able to continue learning the art of app development at home with the outreach program at TSU in the coming academic year through the Young Developers Project (YDP).

Students who finished the program were rewarded with a certificate of completion and a NeuTab 7 tablet for further development. During the fall semester, Dr. Oscar H. Criner will continue the outreach program to these students with a Saturday morning program two times a month and an after school with the "Who Am I" program at Fondren Middle School. The outreach effort is to encourage young people to prepare Apps and participate in the Congressional STEM Academic Competition, the House App Challenge. This competition is a nationwide event for high school students across the country to compete by creating and exhibiting their software applications. The Department of Computer Science, Mobil Applications Development Group, Drs. Lila Ghemri, Aladdin Sleem, and Oscar Criner will mentor the participants in the contest.

Student participants came from the following schools: Fondren, Christie McAuliffe, Eastwood Academy, Albert Thomas, YES Prep, Hartman, Pin Oak, Lewis, Sam Jamison, and Smith Middle Schools and Bellaire High School.

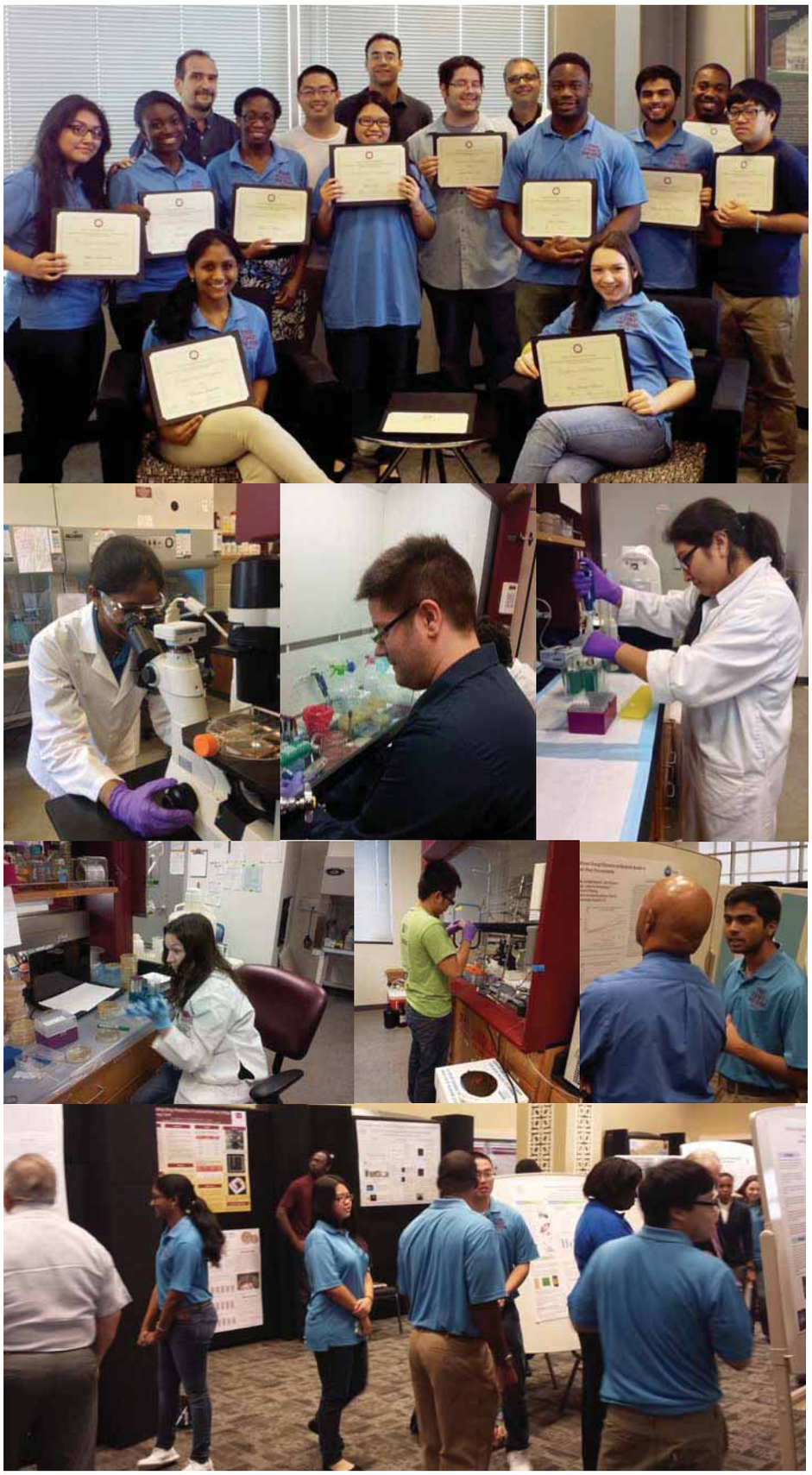
NSF RISE
Summer Program

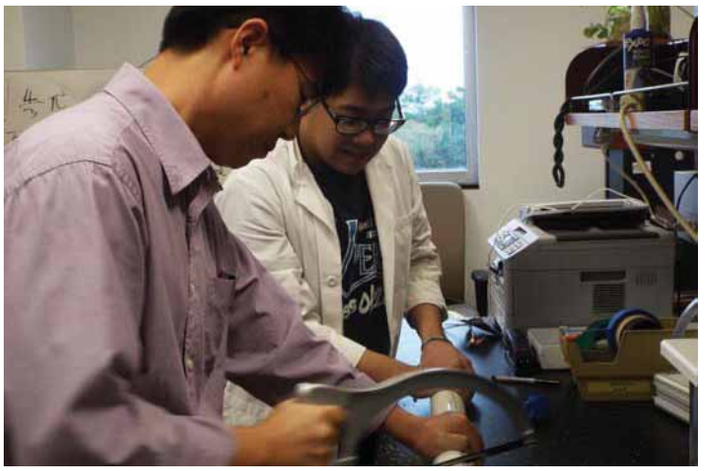
The newly-funded National Science Foundation Research Infrastructure in Science and Engineering Program in the College of Science and Technology recruited 11 students (5 rising senior high school students and 6 undergraduate students) to work with investigators for 10 weeks during the summer 2014. The Summer Research Program was held in the College of Science and Technology from Monday, May 26 , 2014 to Friday, August 8, 2014.

Students from DeBakey High School for Health Professions, Houston, University of Texas-Austin, and Texas Southern University participated in the summer program. Each student received hands-on training in principles, instrumentation, and techniques, and participated in laboratory meetings to formally/ informally discuss research and current literature related to research topics.

The participants received career planning and guidance on how to apply to research doctoral programs. Each student submitted a written report at the end of the summer program detailing the research in which they participated, and how the experience has affected their plans for the future. The participants also submitted 8 manuscripts for publication.

The students presented their work at the TSU Summer Undergraduate Program Research Showcase on August 1, 2014. Several RISE summer program students received awards for their posters and oral presentations.





COST Summer Undergraduate Research Program:
A Renaissance of Excellence

During summer 2014, the College of Science and Technology (COST) Summer Undergraduate Research Program (SURP) sponsored 20 talented undergraduate students to promote participation in various research projects in STEM (Science, Technology, Engineering, and Mathematics) fields under the supervision of 19 faculty mentors. Through participation in this 9-week program (June 2- August 1), these 20 students from 9 academic departments, which is a significant increase compared to last summer (16 students from 5 departments), received hands-on research experience and had opportunities to access to many state-of-the-art instruments such as gas chromatograph-mass spectrometer and multimode inverted microscope.

The COST provided $2,000 fellowships to students for their participation in this program and $1,000 to their mentors for research supplies. All student participants worked very hard with their mentors to produce meaningful research data. They participated in development of more efficient photovoltaic solar cells and low-cost NMR. They also investigated the spread of disease during flight travel, impacts of the utilization of antimicrobial soaps on water quality, identifying biomarkers for aggressive breast cancers, toxicity of indoor dust to gut microbial system, and prediction of cracking on farm-to-market roads. They learned how to develop smart phone applications for traffic control around stop signs and for performing percent tip calculations based on the quality of service provided. They were also exposed to research techniques such as polymerase chain reaction (PCR), gel electrophoresis, and DNA sequencing.

At the end of the 9-week period, all students gave excellent oral and poster presentations that were dominant among all of TSU's summer research programs. Six SURP posters won first, second, or third places, accounting for more than 50% of the total awards. Through these presentations, students practiced their presentation skills, demonstrated their understanding of research projects, and promoted interaction between other students and faculty members. Students also submitted manuscripts that will be published in the Proceedings of COST SURP 2014 in this fall.

At the closing ceremony, student participants mentioned that this program provided great opportunity for them to obtain research experience through participation in major research projects. They strongly encouraged other student fellows to participate in this program. They also mentioned that this program inspired them to plan to enter graduate programs, demonstrating that one of the goals of SURP was successfully accomplished.

COST SURP, which was coordinated by Drs. Hyun-Min Hwang and Yunjiao Wang, was very successful and Dean Lei Yu expressed that he is willing to support more students next summer, pending budget availability. Although it was only the second year, there is no doubt that SURP will be classed as another precious tradition of the COST.

SUMMER MARITIME ACADEMY

TEXAS SOUTHERN UNIVERSITY

During summer 2014, forty students participated in the fifth cohort of the Summer Maritime Academy (SMA) at Texas Southern University. The purpose of the SMA was to introduce rising high school juniors, seniors, and recent high school graduates to the maritime industry and to introduce them to the undergraduate program in Maritime Transportation Management and Security (MTMS) at TSU.

The MTMS program, a partnership with the Port of Houston Authority offers students a Bachelor of Science degree in Maritime Transportation Management and Security and addresses three nationally recognized priorities-logistics/freight, homeland security, and environment in a single curriculum.

The non-residential SMA was held on the campus daily in the new Spearman Technology Building. The first day focused on a general maritime overview. Each day of the SMA focused on one of the nationally recognized priorities: logistics/freight distribution, homeland security, and environment. The week included lectures from local maritime industry leaders, and, for the first time, a leadership component led by former U.S. Customs and Border Protection Houston Field Office Manager Jeff Baldwin, and Houston Community College-Southeast Workforce Dean Dr. Johnella Bradford.

The students enjoyed field trips to the Port of Houston Authority and the U.S. Coast Guard Sector Houston facility at Ellington Field. The highlight of the week was a demonstration by U.S. Customs and Border Protection (CBP) Officer David Patino and other CBP officers on the detection of contraband items.

The week concluded with a closing ceremony honoring the 2014 Paul Cuffee Leadership Maritime Award (PCLMA) winner, Mr. Carl Davis. Each year the PCLMA is awarded to an individual or organization who advances minorities in the Maritime Industry in the Texas Gulf Coast region. Mr. Davis was awarded the PCLMA for his outstanding contributions and dedication to the Maritime program at Jack Yates High School.

Summer Pre-College Engineering Program

The Engineering Technology Department hosted its 8th annual Summer Pre-College Engineering Program from July 7 through July 19, 2014. The goal of this program was to reach out to students who have been historically under-represented in the STEM fields, particularly engineering. This year's program featured workshops carried out by guests from various STEM disciplines including Engineering, Alternative Energy, Transportation and Biology. The overall theme for the program was Civil Engineering and featured lessons focused on how bridges are engineered to withstand weight, while being durable, and aesthetically pleasing. The participants worked in teams to design and a build bridge and evaluated its effectiveness. They presented their observations to the audience comprising their classmates and family members. The program also featured an Environmental Engineering Component that concluded with a field trip to a water treatment plant.

Research and Engineering Apprenticeship Program

This summer, three high school students were selected to participate in the 6-week Research and Engineering Apprenticeship program (REAP). In this program the participants worked closely with a faculty advisor, Dr. Graham Thomas, and an undergraduate student to investigate the effects of different materials on solar cells rather than the conventional photovoltaic.

At the conclusion of this program the participants presented their findings to guests, faculty and staff of the Department of Engineering Technology. The REAP is funded by the United States Army Educational Outreach Program.

The Black Pilots of America: Summer Flight Academy

Texas Southern University Aviation Science and Technology Department has hosted the Summer Flight Academy for ten years with this past summer being the tenth year.

There are various chapters of the Black Pilots of America, one of which is the Houston Chapter Bronze Eagles which sponsors participants via a scholarship competition. All expenses associated with the Summer Flight Academy are paid in full and the selected students are transported to Houston to participate in the program. The Summer Flight Academy, as it is best known, engages students in 40 hours of classroom instruction and 10 hours of flight time. The students have a very rigorous daily schedule which begins at 7:00 a.m. each day and ends at 9:00 p.m. in the evening. On one of their weekends the summer flight academy students participate in the Black Pilots of America Dr. Jesse Hayes Memorial Fly-in which is held at Ellington Airport. During the event, members of Black Pilots of America provide airplane rides to under-privileged, minority, and special needs children; many which have never had a flying experience before. Approximately 136 youngsters experienced this special flying event.

THE SCHOLOSCARS

2014 Annual Awards Ceremony

"The SCHOLOSCARS," was the theme for the 2014 COST Annual Awards and End of the Year Celebration, held on April 30, 2014, 11:00 AM - 3:00 PM in the Texas Southern University Science Center Atrium. Graduate student, Rachel Guthrie welcomed the guests and Undergraduate, Chi-Tam Nguyen, presented the occasion for the celebration. The 300 plus guests were entertained by DJ Bluetooth as they gathered for this annual event where student scholars, faculty, and staff are recognized for their achievements during the year. All were entertained by Alex Jackson's violin solo and later the "COST Family Feud Game," hosted by Ms. Charlotte Whaley and Mr. Jeff Shaw before the traditional program ending with dancing.

Dr. Azime Saydam began the Awards Ceremony by presenting awards to Dr. Shishir Shishodia, Distinguished Advisement/ Mentoring Award; Dr. Daniel Vrinceanu, Distinguished Research/ Scholarly Activity Award; Nin Wang, Distinguished Graduate Student; Chi Tam Nguyen, Distinguished Undergraduate Student; and Helen Pittman-Cockrell, Distinguished Staff Award.

Dr. Desirée Jackson presented Student Scholarship Recognitions, the Departmental Outstanding Student Awards, Dean's Student Advisory Council Recognitions, COST Student Ambassador Recognitions, and Special Student Recognitions.

Dr. Lei Yu presented the Dean's Leadership Awards to Chi Tam Nguyen, for Exemplary Student Leadership; Kenyata Thomas, for Outstanding Service; Dolly Spencer, for Outstanding Dedication and Commitment; and Shishir Shishodia, for Exemplary Contributions to College Services. He made special mention of the Annual Faculty/Staff Campaign contributions of a record $25,132.00, and of the four 2013 Homecoming Awards including 1st Place Campus Float won by the College.

Awards and Recognitions

COST Excellence Awards

Distinguished Researcher of the Year: Daniel Vrinceanu, Ph.D.

Distinguished Advisement/ Mentoring Award: Shishir Shishodia, Ph.D.

Distinguished Staff of the Year: Helen Pittman-Cockrell

Distinguished Graduate Student of the Year: Ning Wang

Distinguished Undergraduate Student of the Year: Chi Tam Nguyen

COST Dean's Leadership Awards

Outstanding Dedication and Commitment: Dolly Spencer

Exemplary Contribution to College Services: Shishir Shishodia, Ph.D.

Exemplary Student Leadership: Chi Tam Nguyen

Outstanding Service to the College: Kenyata Thomas

Outstanding Student Awards

Aviation Science and Technology: Cheyney R. Abott (UG)

Biology:
Shari Galvin (G)
Shonna Gaskin (UG)

Chemistry:
Corey Williams (UG)

Computer Science:
Md Rezaul Karim Raju (G)
Ayzha Ward (UG)

Engineering Technology:
Brian Dennis (Computer Engineering Technology, UG)
Meron Degefu (Civil Engineering Technology, UG)
Del Laurier (Electronics Engineering Technology, UG)

Environmental and Interdisciplinary Sciences
Sharmila Bhandari (G)

Industrial Technology:
Zipporah Pennington (UG)

Mathematics:
Danielle Brager (G)
Ariel Bowman(UG)

Physics:
Zayne Belal (UG)

Transportation Studies:
Qing Li (G)
Damien Leday (UG)

Undergraduate Research Enrichment Scholarship

Michelle Bessiake, Biology

Ogueri Graceland, Biology

Steven Gradney, Chemistry

Keshawn Legg, Chemistry

Christian Sewell-Cortez, Chemistry

Miles Sewell-Cortez, Chemistry

Graduate Research Enrichment Scholarship

Adedeji Adeniyi, Transportation Studies

Afolabi Adisa, Environmental and Interdisciplinary Sciences

Sharmila Bhandari, Environmental and Interdisciplinary Sciences

Qing Li, Transportation Studies

Ling Liu, Transportation Studies

Ruksana Rahman, Transportation Studies

Mitchell Schnyder, Chemistry

Peijia Tang, Transportation Studies

Cara Woodham, Chemistry

COST Faculty and Staff Scholarship

Lyton Atinga, Electronics Engineering Tech

Sandra Babatunde, Biology

Rashad Cartwright, Civil Engineering Tech

Luis Colon Gonzalez, Biology

Kyle Drayton, Computer Eng. Tech

Chukwunweike Ezeanyika, Biology

DéLicia Holmes, Aviation Science

Simone Holmes, Computer Engineering Tech

Donyeil Hoy, Chemistry

Muhammad Ibrahim, Aviation

David Igwegbe, Biology

Marlin Ingram, Maritime

Emem Watt, Biology

Erin Jones, Biology

Jevaughn Julius, Computer Engineering Tech

Samuel Kanu, Electronics Engineering Tech

Ray Mbonu, Chemistry

Mariagoretti Metu, Chemistry

Sidamari Midala, Biology/ Chemistry

Magdalene Midala, Biology

Chi-Tam Nguyen, Biology

Celestine Obinna, Biology

Anita Ofori, Biology

Blair Ogujiofor, Aviation Science

Kwadwo Osei, Biology

Jesse Ottailobhegbe, Civil Engineering/Mathematics

Ashley Parker, Civil Eng. Tech

Duy Pham, Electronics Eng. Tech

Tommy Quach, Biology

Denise Rivera, Maritime

Adriana Rodriquez, Biology

Sarah Sejoro, Biology

Leandra Stewart, Biology

Joan Tran, Biology

Brandon Wilcher, Biology

CITGO Scholarship for Computer Science

Undergraduate Awardee:

Ayzha Ward

Graduate Student Awardees:

Godswill Nwankwo

Olamide Olajide

Vernaldo Wright

Joseph Flowers Scholarship

Frederick Aferdi, Aviation Science

Abril De La Cruz, Aviation Science

Temitope Gbaja, Electronics Engineering Tech

Bradley Iwe, Biology/Electronics Engineering Tech

Autumn Pitre, Mathematics

The Taylor Award Scholarship

Marquesha Foreman, outstanding Junior Mathematics major

FranChelle Davidson, outstanding Sophomore Mathematics major

Bobby Wilson Scholarship

Quaylon Smith, Chemistry

COST Alumni Association Scholarship

Ikemefuna Nzoiwu, Aviation

2014 TSU Research Week Awards

Dr. Fengxiang Qiao, Department of Transportation Studies, 1st place for Faculty Poster Presentation

Dr. Yi Qi, Department of Transportation Studies, 2nd place for Faculty Poster Presentation

Dr. Mark Harvey, Department of Physics, 1st place for Faculty Oral Presentation

Latissha V. Clark, Department of Transportation Studies, 1st place for Staff Oral Presentation

Yubian Wang, Department of Transportation Studies, 1st place for Staff Poster Presentation

Zayne Belal, Department of Physics, 3rd place for Student Oral Presentation

Jie Liu, Department of Transportation Studies, 2nd place for Student Poster Presentation

Top Dollar Award

The faculty and staff of COST were awarded the Top$ Award for their support of the 2014 Annual Faculty–Staff campaign. The $25,032 raised will support student scholarships. The COST campaign ambassadors are to be commended for their work in facilitating the contributions. Dr. Oscar H. Criner is the COST representative on the University Faculty-Staff Campaign Committee and Ms. Dolly Spencer is the University ambassador for the College of Science and Technology.

2013 Homecoming Awards to College of Science and Technology

Office Suite and Door Decoration:
1st place, Office of the Dean

Office Decorations:
2nd place, Office of Student Services and Instructional Support

Parade/Float Competition:
1st place

Walking Unit Competition:
3rd place

ITS World Congress 2013: Best Paper Award to Dr. Fengxiang Qiao

Dr. Fengxiang Qiao, received the Best Paper Award at the 20th Intelligent Transportation Society (ITS) World Congress in Tokyo, Japan from October 12-18, 2013. The paper entitled “A Short Range Vehicle to Infrastructure System at Work Zones and Intersections” is co-authored with graduate student Jing Jia and Dr. Lei Yu. ITS World congress is the biggest conference in the world, attracting 16,700 attendees in 2013.

2014 TSU Faculty Excellence Award

Dr. Daniel Vrinceanu, Assistant Professor in the Department of Physics received the 2014 TSU Faculty Excellence Award for Scholarly/Creative Activities.

2013 Distinguished Alumni Award

Matthew Zachariah, B.S. (Aviation Science and Technology)
Pilot, Southwest Airlines, Dallas, Texas

Matthew Zachariah graduated Cum Laude from Texas Southern University in May 1996 completing his studies with a Bachelor of Science degree in Aviation Science Management. He is currently employed by one of the most successful airlines in the industry flying passengers throughout the United States.

Kenneth Caldwell, M.D. and Carmella Caldwell, M.D. (Biology)
Kansas City, Missouri

Kenneth Caldwell completed his BS degree in Biology at TSU in May 2005, graduating summa cum laude. He matriculated into the medical program at the University of Texas Medical Branch (UTMB) in Galveston, and completed his MD in the spring of 2009. Carmella Jefferson was a Pre-Med student in the Early Medical Acceptance Program (EMSAP). Carmella, an Honors Program student, graduated summa cum laude, and Valedictorian of the TSU graduating class in May 2007. in June 2011, Carmella completed her MD degree at UTMB. Dr. Carmella Caldwell is an intern in Family Medicine at the Research Medical Hospital in Kansas City.

Sharunda D. Buchanan, Ph.D. (Chemistry)
National Center for Environmental Health, Atlanta, Georgia

Dr. Sharunda Buchanan currently serves as the Director of the Division of Emergency and Environmental Health Services at the CDC's National Center for Environmental Health. Dr. Buchanan received her B.S. and M.S. degrees in Chemistry and Toxicology from Texas Southern University and her doctoral degree in Biochemistry from Clark Atlanta University.

Delores S. Grant, M.A. (Computer Science)
Project Manager - IT, Motorola Solutions Schaumburg, Chicago, Illinois

Delores (Dee) Grant graduated from TSU in 1993, with a BS Degree (Summa Cum Laude), majoring in Computer Science and a minor in Physics. She is an active member of Motorola Solutions Inc. Mentorship Program partnering with Chicago Vocational Career Academy, a member of TSU COST Alumni Chapter, Member of the Motorola Solutions Inc. - Women's Business Council, a member of Project Management Institute (PMI) and an active member in her local Church.

Kanayo U. Okafor, B.S. (Engineering Technology)
Region Engineer, Baker Hughes Pressure Pumping GoM, Houston, Texas

Kanayo Okafor graduated from Texas Southern University in May 2008 with a B.S. degree in Electronics Engineering Technology and quickly gained employment as a Field Engineer for Baker Hughes Incorporated. Kanayo currently works in-house as a Region Engineer in Houston, Texas for operators such as Apache Corporation, W&T Offshore, and Energy XXI. As a graduate of Texas Southern University, Kanayo is humbled by the experiences he had as a student and as a professional, he continuously strives to better himself as an engineer.

Natalie H. Moore, Ph.D. (Department of Environmental and Interdisciplinary Sciences)
Michael E. DeBakey VA Medical Center, Houston, Texas

Dr. Moore received her Bachelor of Science degree in Biotechnology from the University of Houston- Downtown in 2003, a Master of Science degree in Healthcare Administration from Texas Southern University in 2006, and a Doctor of Philosophy degree in Environmental Toxicology from Texas Southern University in 2009. In 2012, Dr. Moore was certified as a Health and Safety Professional by the International Board for Certification of Safety Managers.

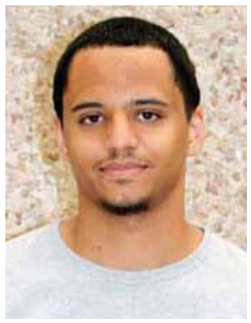
Lisa Richardson, B.S. (Industrial Technology)
L.R. Richards Construction Authority Atlanta, Georgia

Lisa Richardson is a proud alumna of Texas Southern University School of Technology, graduating in the class of 1991. Lisa's professional career began at Houston Independent School District. Lisa gained her entrepreneurial wings by establishing L.R. Richards Construction. In her 17 years as President and CEO of L.R. Richards Construction, Lisa has built her company's solid reputation and her professional competency in the industry by delivering the best possible services with the highest integrity.

Nchekwube Mbamalu, M.S. (Mathematics)
Geophysicist, Nexen Petroleum, Houston, Texas

Mr. Nchekwube Mbamalu received his B.S. in Mathematics from Texas Southern University in 2008, his M.S. in Geology from Louisiana State University in 2010, and is a prospective student for the professional MBA program at the University of Houston. He is currently a geophysicist at Nexen Petroleum, where his primary focus is quantitative rock physics.

Micheal Rashaun Smith, B.S. (Physics)
M.S. Candidate, Health Physics Program, Texas A&M University, College Station, Texas



Mr. Micheal Smith was one of the top TSU – Bachelor of Science Physics graduates in May of 2012. While at TSU he was supported by an NSF-LSAMP scholarship in pursuit of the Health Physics track. Micheal is a 2nd year master's student at Texas A&M's Nuclear Engineering Department as a part of the Nuclear Security Science and Policy Institute.

Jim Dickinson, M.S. (Transportation Studies)
Senior Transportation Planner, 8-County Houston-Galveston Management Area

After the good times in the oil patch turned bad, Jim decided to go back to his original profession with upgraded skills. He explored the Transportation Planning programs at Texas A&M and TSU. When he met Dr. Ledé in the fall of 1993 he decided that the TSU program was right for him. While working full time at Parsons Brinckerhoff conducting regional travel surveys for the Houston-Galveston Area Council, Jim started the program in the spring of 1994. When the surveys were completed in 1996, the H-GAC offered Jim an entry-level position in the Transportation Planning department. He graduated in the summer of 1997.

AVIATION SCIENCE AND TECHNOLOGY

The Department of Aviation Science and Technology received its coveted Federal Aviation Administration Certificate approving its Private Pilot Ground School Course. This certification is notable because TSU now has the only four-year, state-supported pilot program in Texas. The Aviation Science Management Program also received a 6-year term accreditation from the Association of Technology, Management, and Applied Engineering (ATMAE).

The department has the largest enrollment of females in the program since its inception. The department currently has 16 female majors, some whom are currently employed in the industry. The Aviation Science Management degree affords employment in the areas of homeland security, airport management, air traffic control as well as the more recent supplementary concentration in commercial flight. The ladies gathered for a female photo shoot to showcase the velvety side of aviation.

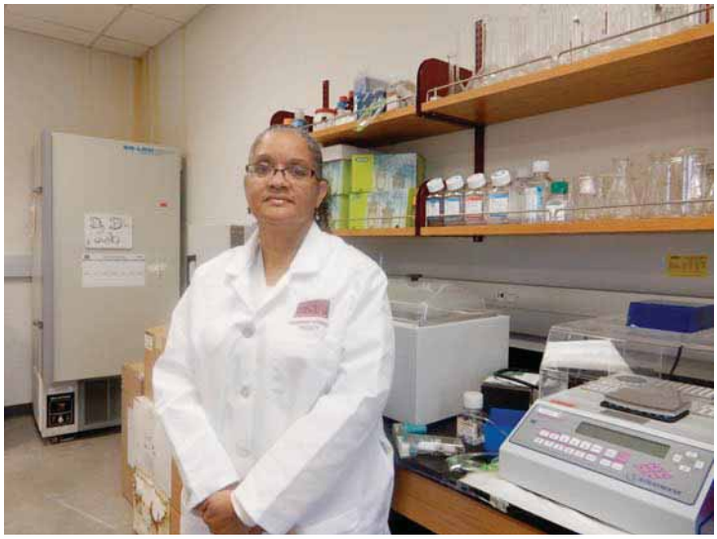
Aviation students are currently working in the aviation industry as part-time and full-time employees. This trend is growing rapidly as more and more students are being hired in the aviation industry prior to internships and graduation. Students have acquired employment in FBO's such as, Million Air, Signature Flight, and Southwest Airport. Jobs include Line Service Techs, Landside Operations Assistants, Customer Service Representatives, Ground Transportation Representatives, Ramp Agents, etc.

Senior Aviation students, Erik Cao, Stephanie Fagan, and Ancy Thomas are currently working as management interns in the aviation industry at various HAS airport and surrounding FBOs. Erik serves as an intern at George Bush Intercontinental Airport-Houston, cataloguing usage of building and land, airport tenant locations, and verifying addresses and lease agreements on airport property. Stephanie and Ancy are interning at William P. Hobby Airport working on an traffic circulation project. Their job duties are to calculate the curbside roadway level of service.

Perry Miller received the 2013 Distinguished Alumni award for Public Administration at the President's Gala, held on October 18, 2013. Mr. Miller is the General Manager for the Houston Airport System's William P. Hobby Airport.

Major General John H. Bailey II, (Retd.) was invited as the 2013 Commencement Speaker for Embry-Riddle Aeronautical University – Houston Campus.

BIOLOGY



The Department of Biology is the largest department at Texas Southern University. For the academic year 2013-2014, the department successfully graduated 96 students with the Baccalaureate of which 22 graduated with honors. Thirteen students received their masters degrees.

The National Science Foundation (NSF) Research Infrastructure in Science and Engineering (RISE) was awarded to Texas Southern University in March 2013 to support proposed research on Characterization of Biomolecular Response to Environmental Stress. The program is based in the Biology Department. Investigators will engage in basic research to improve the understanding of general biological principles guiding cellular responses to environmental stress.

NSF RISE conducted its first summer research program from May 26 - August 8, 2014. A total of 11 students participated in the program which included 5 rising seniors from DeBakey High School for Health Professions.

Weekly seminars were held for the student participants . They participated in faculty mentored research projects, and in various activities designed to expose them to careers in biomedical science and medicine while also providing them with a tool set to pursue those careers. These activities included: guest seminar lectures in career options, ethics in research, interviewing skills, writing personal statements, making resumes, searching literature, using PubMed, writing research articles/reports, laboratory research, presentations, and time management. Participants prepared and presented a professional research poster and submitted a manuscript based in their research.

Dr. Alamelu Sundaresan, PI on NASA NSTI Grant received the "Best Poster Award " at the International Congress of Nutrition and Integrative Medicine" in Sapporo, Japan. Dr. Sundaresan also participated in a successful parabolic flight campaign where an experiment was flown to space on SpaceX3. Dr. Sundaresan conducted STEM outreach at Crockett Elementary School in Downtown Houston.
Five NASA NSTI interns worked at Johnson Space Center in Houston over the summer in different areas including Engineering and Life Sciences.

The NASA URC Center for Bio-nanotechnology and Environmental Research successfully completed its 6-year term this year. The NASA URC was based in the Biology Department since October 2008. The program helped graduate over 30 graduate students and 60 undergraduate students over the 6-year period.

Four students from the TSU Early Medical School Acceptance Program were accepted to University of Texas Medical Branch at Galveston, and one student from the TSU Joint Admission Medical Program was accepted to the medical school at the UT Health Science Center-Houston this year.

The faculty and the students in the Biology Department published several peer-reviewed journal publications and conference abstracts.

CHEMISTRY

During the 2013-2014 academic year the Chemistry Department graduated six students with Masters degrees and eighteen students with Baccalaureate degrees.

Texas Southern University's American Chemical Society (ACS) Chapter and the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) Student Chapter sponsored "STEM-ulating College for a Day," co-hosted by The Links Incorporated, Missouri City Chapter on Saturday, April 5, 2014 from 8:00 a.m. to 4:00 p.m. Louis Stokes Alliance for Minority Participation (LSAMP) Scholars served as Ambassadors for the day wearing their burgundy LSAMP t-shirts with blue jeans and tennis shoes. Scholars, also conducted workshops, campus tours, and assisted as needed throughout the day. Mr. Daryl F. Wilkerson, TSU Chemistry Instructor and Laboratory Coordinator, organized two High School Breakout Sessions, with six workshops/labs in both sessions, with "Reactions" chemistry demonstrations and hands-on experiments for the students.

All LSAMP Scholars are required to apply for summer internships. The students have applied for a minimum of three to five internships to strengthen their chances of obtaining an internship. A number of students received offers and are accepted in prestigious internships. These positions last from a period of four weeks to six weeks up to ten weeks depending on location and job assignments. These internships are paid positions ranging from $400.00 per week to $700.00 per week! Congratulations to the LSAMP Scholars who have accepted offers.

Nine of the LSAMP Scholars presented their research completed during the summer 2013 at Texas Southern University Research Week, eight were Chemistry majors. The American Chemical Society Conference was held at the Dallas Convention Center in Dallas, Texas March 16-20, 2014. There were over 5,000 students in attendance presenting posters at the conference. American Chemical Society boasts the largest membership of scientific organizations in the country. Two LSAMP Scholars attended with partial support from the ACS and NSF.

Dr. Bobby Wilson was invited by Northwestern University Graduate School to bring a student to Northwestern to visit the various graduate studies programs. Corey Williams, a double major in chemistry and biology traveled with Dr. Wilson to Northwestern University on April 23-26, 2014.

LSAMP Scholars volunteered at the Shape Community Center assisting with the Monthly Food Co-op in the neighborhood of elders on the 3rd Saturday, April 19, 2014.

COMPUTER SCIENCE

The Department of Computer Science (CS) is housed in the new Technology Building as of Spring 2014. The department has 6 fully equipped teaching labs and one research lab. The new environment and state-of-the-art facilities will certainly help the Department in its primary mission of preparing CS students to enter into the workforce and graduate study. The facilities support the department's secondary mission of ensuring that all CS students have a basic understanding of the impact of computing/information technologies upon society and have the ability to cope with the infusion of these technologies in the professional or work environments in which they will eventually function. The CS Department has an active service plan for students. It offers the BS degree in Computer Science with a general concentration, the BS degree in Computer Science with computer networks concentration, the MS degree in Computer Science, and a Ph.D. degree in Environmental Toxicology affiliated with the Department of Environmental and Interdisciplinary Sciences. CS graduates are very well placed and recognized within the Computer Science professions, at both the national and international levels. During the 2013-2014 academic year, over 64% of CS graduate students received assistantships, and over 35% of undergraduate students received scholarships from the department, the college and the university. In addition, a high percentage of students in the CS Department have received various external and internal awards, indicative of the quality of the students and the CS academic programs.

During last academic year, CS faculty members have continuously made great efforts towards excellence in teaching, research and professional activities. The curriculum for CS 116 and CS 117 have been significantly modified and strengthened. Many CS faculty members actively participated in the TSU curriculum committee meetings when the CS classes were discussed. The first CS Career Development Day was helped in the Spring of 2014 and attracted over 50 student attendees. Work continues on research projects in the department such as the NSF-funded Center for Research on Complex Networks, the Homeland Security funded Center for Command Control and Interoperability for Advanced Data Analysis, and NSF funded Enriching Security Curricula and Enhancing Awareness of Security in Computer Science and Beyond. Dr. Miao Pan received a new NSF grant on Cognitive Mesh in Making Cellular Networks more Flexible for the period of January 2011 to December 2017, which brings a total of $287K to TSU. Due to the excellent performance and great accomplishments of CS faculty members and students, various honors were awarded to our faculty and students: the International Journal of Distributed Sensor Networks selected Dr. Miao Pan as a board member, the Arab American Association of Engineers & Architects awarded Dr. Lila Ghemri in recognition and appreciation of her performance, and the best Conference paper award was awarded to graduate student, Mr. Chenyu Wang, with Dr. Wei Li as advisor and Dr. Xuemin Chen as Co-advisor, by IEEE International Conference on Networking, Sensing and Control (2014) held in Miami. Over 50% of CS faculty actively participated in the preparation of the multiple new Centers of Excellence in the Air Force and will make many more contributions in CS-related research and curricula.

ENGINEERING TECHNOLOGY

The Engineering Technology Department began the academic year with an excellent start by securing a full 6-year reaccreditation of the Electronics Engineering Technology degree program. The reaccreditation was awarded by the Accreditation Board for Engineering and Technology (ABET).

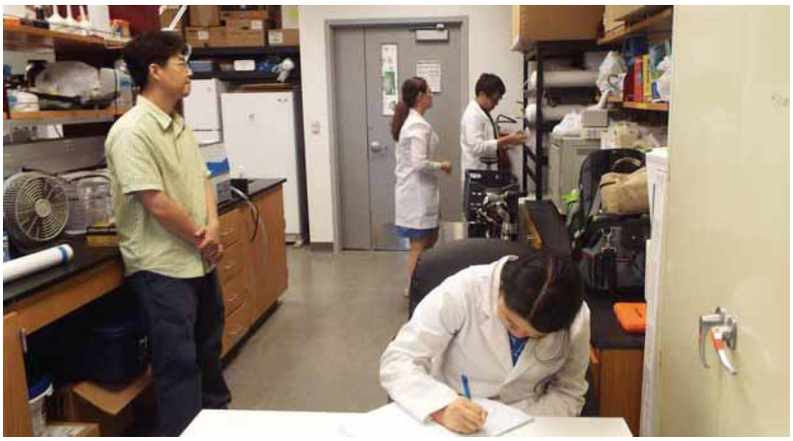
In the spring semester, the TSU chapter of the National Society of Black Engineers (NSBE) had a record breaking sixteen students attend the annual national convention. This convention was held in Nashville, Tennessee from March 26-3, 2014. During the convention, students were exposed to professional engineers at the Career Fair who gave them advice on improving their resumes to stand out from all other students. A number of students had interviews with major companies with one student being offered a summer internship. Other students also received follow up emails or phone calls from employers. During the visit, a recruiter from Toyota expressed interest in recruiting students from TSU to increase diversity in their company. Another TSU student, John Shoboiki participated in a raffle by Eastman Chemical Company and won $1000 for the TSU chapter of NSBE. The trip was sponsored by the College of Science and Technology.

Following this trip students were treated to an additional career fair held by TSU Career Planning and Placement in collaboration with the Engineering Technology and Transportation Studies departments. Companies that participated in the Maritime Transportation and Engineering Fair included PLS Logistics, ExxonMobil, NASA, City of Houston Public Works and Engineering Department, Metro, U.S. Customs and Border Protection, Total Quality Logistics, Port of Houston Authority, and Nolan Transportation Group among others.

To add to this year's accomplishments, Dr. Graham Thomas received a research award sponsored by NASA and Boeing. This research involves converting power modules for the International Space Station from one format to the next (MASR-VHDL) and comparing the conversions by using System Vision and Saber Software.

Other external awards received by Faculty in the department include the Nigerian Extractive Industries Transparency Initiative (NEITI). The Department had an activity packed summer with the Summer Precollege Engineering Program and the Research and Engineering Apprenticeship Program.

ENVIRONMENTAL AND INTERDISCIPLINARY SCIENCES



The Department of Environmental and Interdisciplinary Sciences (EIS) at Texas Southern University offers both the M.S. and Ph.D. degrees in Environmental Toxicology. The department strives to be a leader in scientific research and education, as well as becoming one of the flagship departments at Texas Southern University. The department offers the sole Ph.D. degree within the College of Science and Technology.

The EIS department strives to be a dynamic and interdisciplinary environment where creative faculty and dedicated students perform cutting edge research, and where our graduates, both M.S. and Ph.D., are fully prepared for whatever their futures may demand. We are committed to providing access and opportunity to our diverse student body. Faculty members within our department not only attract external grants primarily from the National Science Foundation and the US Department of Agriculture but also from other federal agencies and private foundations. Our faculty's research findings appear in highly regarded peer-reviewed journals (most of which index on PubMed and other key databases). Further, our faculty serve on numerous editorial boards and have also won numerous college and university research and teaching excellence awards.

The research interests of faculty who participate in our Environmental Toxicology program are very broad: water, air, and soil monitoring; environmental chemistry; systems biology; toxicant exposure gene profiling; environmental microbiology; cell signaling; ecotoxicology; remote system monitoring; and transportation-related/induced health disparities. The EIS department currently has 4 tenure track or tenured faculty members, with an additional 15 Environmental Toxicology-participating faculty from related departments (e.g. Chemistry, Biology, Computer Science, Transportation Studies) who contribute to departmental teaching, and mentoring of Environmental Toxicology students' research projects.

Additionally, our department has 2 adjunct faculty members and several Graduate Teaching Assistants who teach our undergraduate Geology course. The department has an active journal club as well as a seminar series in which faculty and students actively participate by presenting their data, and/or cutting edge/high impact journal articles.

INDUSTRIAL TECHNOLOGY

The primary mission of the department is to offer programs of study designed to prepare students as "management-oriented technical professionals" who have practical knowledge, competencies, skills, and training to serve and function in the Industrial/Manufacturing Enterprise System. In pursuing this mission, the department seeks to prepare Industrial Technologists and Technical Managers for career opportunities in the Construction, Communications, and Manufacturing Industries.
The Department of Industrial Technologies offers the Bachelor of Science degree in Industrial Technology in which students have two program options to select from: Construction Technology or Design Technology.

The Department Advisory Board is composed of technical professionals, alumni, and faculty. Mr. Emroy Jones (TSU Graduate) was elected to serve as Chairman of the Advisory Board. TSU Graduate Ms. Lisa Richardson, owner and president of LR Construction – Atlanta, GA., was selected to serve on the board. The board made several recommendations relative to program course offerings such as: (1) incorporating Laser Technology into existing courses, (2) offering Building Information Modeling and Integrated Systems, and (3) introducing Green Building Technology.

The new Leonard H.O. Spearman Technology Building was completed during the Fall 2013 semester. In this building, the department has 2 fully-equipped computer-aided design labs housing the latest graphic computers, printers, plotters, and smart boards. The construction laboratory has the latest high-tech equipment such as a table saw, bandsaw, planer/jointer, and tables and seating for lectures.

In April 2013, the department received re-accreditation from the Association of Technology, Management, and Applied Engineering (ATMAE). In November 20-23, 2013, Drs. Yu, Shishodia, Olowokere, and Horner traveled to the Annual ATMAE Conference in New Orleans, LA to appear before the accrediting board where programs in both Construction and Design were given re-accreditation.

In September 2013, the department established contact with Mr. George T. Reynolds of Timken Corporation for possible internship opportunities for technical students. On September 13, 2013, Drs. Horner, Lewis, and Lott traveled to Timken Corporation for a tour of their facilities on the north side of Houston. Mr. Reynolds was invited to the TSU campus to speak to students about Timken on October 3, 2013. Several students expressed an interest in internship opportunities with Timken. During the 2013–2014 academic year, DeMarcus Foster (Construction Technology), Jermaine Potts (Design Technology)
and Jessica Story (Design Technology) participated in internships with the TSU Facilities and Planning Department.

The department of Industrial Technology will continue to seek and develop new initiatives and teaching methods to enhance student learning experiences.

MATHEMATICS

The 2013 – 2014 Academic year was another great year for the Department of Mathematics. Two students have been accepted into PhD programs at various universities: Danielle Brager who earned her master's degree in May 2014 decided to go to Arizona State University with full funding, and Ariel Bowman who earned her BS degree in May 2014, decided to go to the University of Texas-Arlington with full funding. In addition, Ariel Bowman graduated as Valedictorian for the TSU Spring 2014 commencement. Producing high quality graduates continues to be a top priority of the Mathematics Department. The fact that other universities are recognizing the quality of our graduates is a tribute to the dedicated faculty of the department.

Moreover, during the 2013-2014 academic year, the department served close to four thousand students, offered approximately 120 courses, and graduated seven undergraduates and two graduate students. Danielle Brager and Kayrath Andy Vongphrachanh received their Master of Science degrees in May 2014, with graduate student theses supervised by Dr. Nehs and Dr. Taylor respectively.

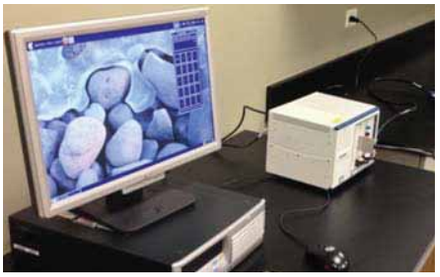
Mr. Nchekwube Mbamalu, a geophysicist at Nexen Petroleum, is recognized as a mathematics department distinguished alumnus. The department of Mathematics recruited two new faculty members: Dr. Yunjiao Wang and Dr. Jahmario Williams. Seven developmental mathematics faculty joined the department of Mathematics to teach developmental mathematics courses. The department of Mathematics developed several new mathematics core curriculum courses and these new courses were offered during the Fall 2014 semester.

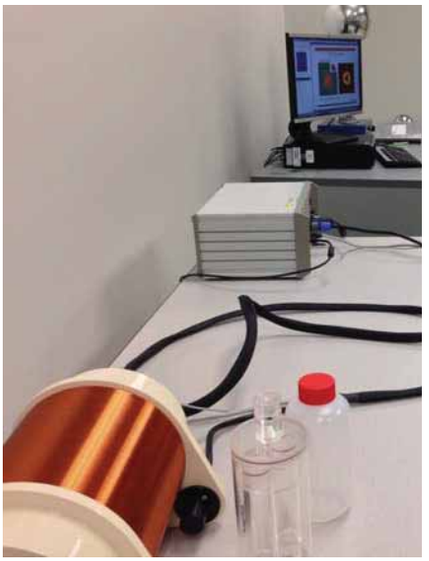
Some more highlights of faculty and student accomplishments are as follows: Dr. Chilakamarri, Dr. Glenn, Dr. Holmes, Dr. Nehs, Dr. Taylor, Dr. Wang and Dr. Williams have published their papers in respected journals. Several faculty members gave various presentations at local, regional workshops or conferences.

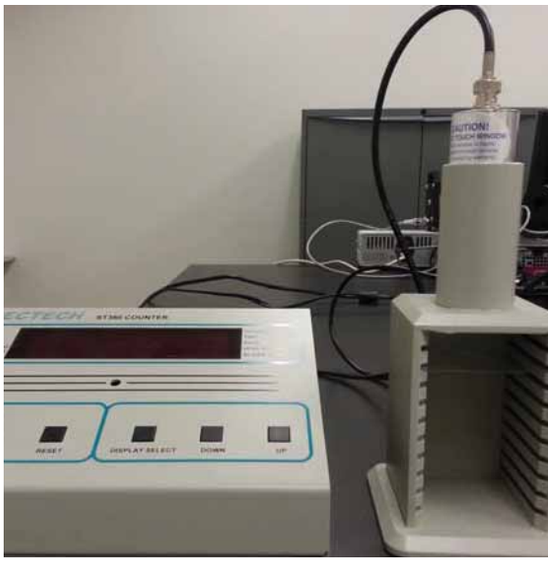
Drs. Chilakamarri, Holmes, Kazakos, Saydam and Wang participated in submission of some grants. Dr. Llayron L. Clarkson and Dr. Michael Field gave research seminars to the student chapter of the Society of Urban Mathematicians (SUM). Danielle Brager and Ariel Bowman received the Outstanding Undergraduate Student and Graduate Student awards respectively.

Some faculty and students attended the Sixth Annual Iowa Mathematical Field of Dreams Conference. Ariel Bowman, Franchell Davidson, Marquesha Foreman, Autumn Pitre and Valerie Tolbert were awarded prestigious student awards. Marquesha Foreman and Autumn Pitre were recognized for their 4.0 grade point average by the Honors College during its Spring Convocation.

PHYSICS







During the 2013-2014 academic year the physics program has made advances impacting its academic mission, research/scholarship profile, and student training.

Starting in the Fall of 2013, TSU-Physics became an active participant within the Texas Physics Consortium delivering physics lectures, led by Dr. C. R Handy, across eight other campuses throughout the State: Midwestern State University, Prairie View A & M University, TAMU-Central-Texas, TAMU-Commerce, TAMU-Corpus Christi, TAMU-Kingsville, Tarleton State University, West Texas A& M University,. These were facilitated by the $15,000 TTVN system acquired in 2013, and the dedicated electronic classroom in the new Spearman Technology building. The number of physics majors has begun to increase with approximately ten declared majors as of the Summer 2014. The new campaign focusing on the importance of a degree in physics for aspiring medical students is attracting much attention. Statistics confirm that physics majors surpass other majors on the MCATs. This point was brought home when a recent physics graduate, Mr. Hiue Nguyen was accepted into the Tulane medical program. A new track in Medical Health Physics will be initiated in the Fall. Already, the forerunner to this program, Health Physics, has produced one M.S. graduate, Mr. Micheal Smith, who will begin employment at the Nuclear Regulatory Commission in Washington D.C., following his graduation in Health Physics from Texas A & M University, College Station. Another recent graduate, Mr. John Metyko, a radiation officer at MD Anderson Cancer Center, is completing his M.S. through UT-Austin. Our first graduate (2010), Mr. Brandon Georgetown is an Environmental Engineer with General Electric Oil and Gas. All these students were mentored by Dr. Mark Harvey, Director of the Medical Health Physics Program.

A testimonial to the research vitality of the physics department are the two awards to Dr. Daniel Vrinceanu: both COST and TSU 2014 Researcher of the Year. Complementing these efforts, the department published (or has had accepted) seven papers; has six papers in preparation; made nine presentations at regional, national, and international conferences; won three major awards from the Department of Defense, the National Science Foundation, and the Naval Research Office; and submitted seven proposals.

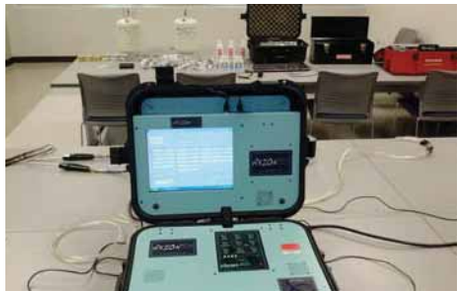
By the end of 2014, the High Performance Computing Center will have been fully configured with new, state of the art, parallel processing platforms. A 3-D Visualization system is also anticipated for advanced research in molecular design. The department is pushing the frontiers of forefront research by advances in noise filtering analysis as applied to bio-systems research, atomic physics, molecular/materials design, mathematical physics, large scale computing, and nuclear physics.

TRANSPORTATION STUDIES

The Department of Transportation Studies has a mission to provide comprehensive transportation education that builds on the latest data, systems, and technologies. This mission is exemplified through quality instruction, cutting edge research activities of faculty members, and outstanding service to students and community.

Currently, the department offers a Bachelor of Science (B.S.) degree in Maritime Transportation Management and Security, a Master of Science Degree in Transportation Planning and Management, and is affiliated with the Ph. D. program in Environmental Toxicology and the Ph.D. program in Urban Planning and Environmental Policy.

During the 2013-2014 academic year, the department has a total of 60 undergraduate students and 43 graduate students. Our programs have graduated 9 students with B.S. degree in Maritime Transportation Management and Security, and 17 students with M.S. degree in Transportation Planning and Management. Among our graduates, about 60% of them have been placed at various transportation related industries and government agencies, and 20% of them have entered higher level graduate programs to continue their educations at prestigious institutions, including Virginia Tech, George Mason University, etc. In addition, the senior level students in our programs have successfully secured internship positions at Transportation related companies such as Exel Logistics, Wal-Mart Distribution Center and AET-Tankers, Inc.



The department provided students various opportunities to work with transportation experts and to participate in research activities. Various workshops, seminars, conferences, and field trips have been offered to students to enhance their learning outcomes. Following are some major activities that we offered during the year of 2013-2014:Port of Houston Field Trip – Fall 2014; Fast Forward Job Skills Training – Spring 2014; Visit from SUNY Maritime College – Spring 2014; Maritime Students Visit PHA Commission Meeting – Spring 2014; Maritime, Transportation and Engineering Job Fair – Spring 2014

Most importantly, the department offers Research Assistantship opportunities to graduate students so that they can engage in research. In this academic year, 100% of the tenured/tenure-track faculty members have received external grants through internal and external collaborations, which provide 22 graduate students with Research Assistantships. In addition, scholarships sponsored by the Port of Houston Authority (PHA) are provided to undergraduate students on the basis of outstanding academic performance. During the 2013-2014 academic year, 27 undergraduate students received scholarships from the department, totaling $82.5K. In addition, a high percentage of students in the department have received various external and internal awards, which is indicative of the quality of the students and the academic programs.

TSU Maroon Tails WAI Chapter

The TSU Maroon Tails chapter of Women in Aviation, International, participated in the 29th Annual Wings over Houston (WOH) Airshow, October 25 – 27, 2013. This is the chapter's second year volunteering for the WOH Airshow. Duties for the TSU-Maroon Tails included assisting event organizers and the Commemorative Air Force, in their efforts in setting up the prime view area seating for the WOH Airshow. The viewing area was set up in record time and requests have been made for the chapter to assist the WOH organizers for the upcoming show in October 2014.

ITS TSU Student Chapter Toys for Kids Christmas Party

Led by Faculty advisor Dr. Fengxiang Qiao and President Kiekie Li, 12 students, staff and their family members from Intelligent Transportation Society TSU student chapter served as volunteers from 10am to 3pm, December 2014 in George Brown Convention Center. This is the 19th annual event organized by Congresswoman Sheila Jackson Lee, distributing Christmas gifts to 3,000 less fortunate children of Houston. TSU volunteers were in charge of distributing gifts to kids of age groups 4-6 and 7-9, which took about half of the benefited children on the day.

Fast Forward Skills Workshop

The TSU Maritime Industry Advisory Board hosted a workshop for Maritime students on April 10, 2014 to equip them with the skills to help them thrive in a work environment. Twenty undergraduate and graduate students attended the workshop. Survey results indicated that the students saw value in the development of the critical skills of communication, interpersonal, and adaptability and wanted additional training in those areas.

Workshop session topics included: Professional Image and Marketing Yourself; Effective Communication; Dealing with Change; Conflict Resolution; and Organizational Leadership. The workshop was such a huge success that there are plans for another workshop in the future.

TSU-Health Occupations Students of America Volunteering Activity

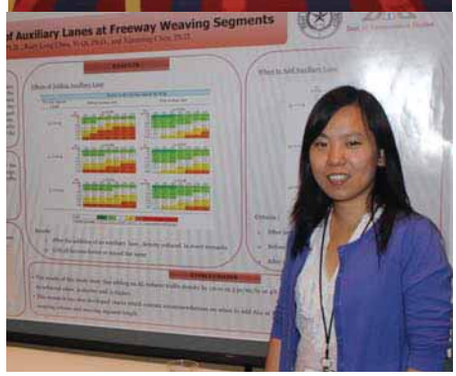
TSU-Health Occupations Students of America (HOSA) chapter members kicked off their year by volunteering as HOSA Area 2 Conference judges for local high school HOSA chapters. Members arrived at John Reagan High School to judge high school HOSA members as they competed in various events such as Extemporaneous Health Poster, Dental Science, CPR/First Aid, Sports Medicine, Biomedical Debate, Biotechnology, and more. TSU-HOSA cordially interacted with other local collegiate chapters such as the University of St. Thomas and the University of Houston while promoting TSU's Early Medical School Acceptance Program to prospective high school students.

Transportation Studies Students Presented Their Research at the TRB 93rd Annual Meeting

As the most significant transportation conference in the world, the "Transportation Research Board Annual Meeting" by National Academies has attracted more than 10,000 transportation professionals from around the world every year. This year, the faculty and students in Department of Transportation Studies traveled to the TRB Conference in Washington, D.C. during the week of January 12-16, 2014. The Transportation Department achieved once more a dynamic presence in this conference with 13 presentations, 12 conference publications and 3 journal publications in total.

Dr Yi Qi, Chair of the Transportation Studies Department, together with her Graduate Research Assistants(RAs), Ms. Ameena Padiath, Ms. Qun Zhao, Ms. Yan Lu and Ms. Jie Liu, made 5 presentations. Dr. Fengxiang Qiao, together with his Graduate Research Assistants, Ms.Qing Li, Mr. Xiaobing Wang, Ms. Ling Liu, Ms. Bo Wei and Mr. Po-Hsien Kuo, gave three presentations. In addition, Dr. Mehdi Azimi gave a presentation on "Impacts of Restaurant Drive-Thru Configurations on Vehicle Emissions." Dr. Carol Lewis, Director of CTTR gave presentations with her Graduate Research Assistant, Mr. Walter Council, and Mr. Vincent Hassell. In addition, Mr. Paul Simmons and his student Ms. Marcia Robin-Stoute also presented their research.

Seven TSU students were showcased as Eisenhower Fellows. They are Mr. Walter Council, Ms. Qun Zhao, Ms. Ameena Padiath, Ms. Marcia Robin, Ms. Veronica Green, Mr. Femi Babalola and Mr. Peter Stoute.



TSU JAMP Students Attended Summer Internship at Texas Tech University Health Science Center, Lubbock

Tracy Taylor (top left) and Quaylon Smith (top right), both chemistry majors participated in a 5-week long paid summer internship at the Texas Tech university Health Science Center, Lubbock. Both Tracy and Quaylon are in the Joint Admission Medical Program (JAMP) at TSU. This internship was a valuable pre-medical experience with a sneak peek of what medical school has to offer for future students and an opportunity to create an unbreakable connection with fellow JAMPers across the state of Texas as well as faculty and staff. Their favorite parts about this program were the cadaver dissections and the lectures they attended, such as Anatomy and Physiology. Furthermore, they shadowed an internist who quickly became an inspiration and a role model to them through her display of patience, encouragement and docility towards her patients.

TSU COST Students Accepted to Medical School

Amy Khong, Biology Major
Graduated Spring 2014, Magna Cum Laude
TSU UTMB Early Medical School Acceptance Program
University of Texas Medical Branch (2014-2018)

Shonna Gaskin, Biology Major
Graduated Spring 2014, Magna Cum Laude
TSU Joint Admission Medical Program
University of Texas
Health Science Center-Houston (2014-2018)

Melesh Kristofer, Biology Major
Graduated Spring 2014, Cum Laude
TSU UTMB Early Medical School Acceptance Program
University of Texas Medical Branch (2014-2018)

Mohammad Ali
Biology and Chemistry Double Major
Graduated Spring 2013, Magna Cum Laude
TSU UTMB Early Medical School Acceptance Program
University of Texas Medical Branch (2014-2018)

Chi Tam Nguyen, Biology Major
Expected to Graduate in Fall 2014
TSU UTMB Early Medical School Acceptance Program
University of Texas Medical Branch (2015-2019)

Journal Articles

Ajofoyinbo A and Olowokere D (2014). Health Monitoring and Control of Civil Infrastructures using Wireless Smart Sensors. Bulletin of Electrical Engineering and Informatics, 3(3),201-212

Ajofoyinbo A and Olowokere D (2014). Discounted Semi-Markov Decision Process Based Structural Health Monitoring Model for Civil Infrastructure Systems using Wireless Smart Sensor Networks. European Journal of Scientific Research, 121(4), 347-362

Ayomoh M, Ibidapo-Obe O, and Olowokere D (2014). Inverse Kinematics Analysis of a Five Jointed Revolute Arm Mechanism. Journal of Control Science and Engineering (accepted).

Chen X, L Yu, X Jia, and H Gong (2014). Analytical Procedures for Estimating Capacity of the Urban Expressway Section near Off- and On-Ramps with a Median Exclusive Bus Lane. Journal of Transportation Engineering, ASCE, 140(3), 04013018.

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Lawal A, Kirtley ML, van Lier CJ, Erova TE, Kozlova EV, Sha J, Chopra AK, and Rosenzweig JA (2013). The Effects of Modeled Microgravity on Growth Kinetics, Antibiotic Susceptibility, Cold Growth, and the Virulence Potential of a Yersinia pestis ymoA-Deficient Mutant and Its Isogenic Parental Strain. Astrobiology, 13(9):821-32.

Maruthi Sridhar BB, Witter JD, Wu C, Spongberg AL, Vincent RK (2014). Effect of bio-solid amendments on the metal and nutrient uptake and spectral characteristics of five vegetable plants. Water Air & Soil Pollution, 225: 1-14.

Perotti L, Vrinceanu D, and Bessis D (2013). Enhanced Frequency Resolution in Data Analysis. American Journal of Computational Mathematics, 3, 242-251.

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Publications

Journal Articles

Taylor WE, Nehs RM, and Holmes RB (2014). On the Dynamics of a Certain Fourth Order Difference Equation with Constant Coefficients. Pinnacle Mathematics and Computer Science, Vol. 1(2) (open access)

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Wang Y, R Cheu, Y Qi, and X Chen (2013). Operational Benefits of Auxiliary Lanes at Isolated Freeway On-ramp Junctions. Journal of Transportation of the Institute of Transportation Engineers, Volume 5, Issue 1.

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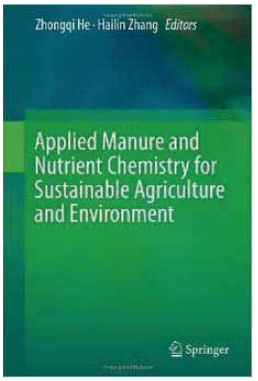

Conference/Invited Presentations

Fang J, Nguyen M, Phan J, Deng Y, Thomas RL, Wilson BL, Wei X. Electro-polymerization of Polypyrrole on Single-Walled Carbon Nanotubes, 69th Southwest Regional Meeting of the American Chemical Society, Waco, Texas. November 16-20, 2013.

Fang J, Wei X, Sapp JB, Deng Y. Synthesis and Characterization of Platinum(II) Complexes Containing Diaminocyclohexane and Thiourea Ligands, 69th Southwest Regional Meeting of the American Chemical Society, Waco, Texas, November 16-20, 2013.

Handy C, Vrinceanu D, Gupta R, Kouri R, Killeen B, Patel K. The Orthogonal Polynomial Projection Quantization Method and Exactly Solvable Quantum Systems: A Moment Representation Shortcut to the Nikiforov-Uvarov Approach. Fall 2013 meeting of the Joint APS-AAPT Texas Section of the American Physical Society, UT-Brownsville, Brownsville, Texas.

Harvey M, Pollard J, Wen Z, Song G. Measurement of the Neutron Ambient Dose Equivalent from the TrueBeam Linac Head and Varian 2100 Clinac. 56th Annual Meeting of The American Association of Physicists in Medicine, Austin, Texas, July 20-24, 2014.

Hillar M. Evolution and Historical Explanation: Contingency, Convergence, and Teleology, Ian Ramsey Center for Science and Religion. St. Anne College, University of Oxford, UK, July 17-19, 2014.

Hillar M. International Meeting of Society of Biblical Studies at Vienna, Austria, July 6-10, 2014.

Hillar M. International Meeting of the Society of Biblical Literature, St. Andrews University, St. Andrews, Scotland, July 7-11, 2013.

Hillar M. The Stoic Logic and Egyptian Divine Metaphysics as the Sources of the Tertullian Doctrine of the Trinity, XXIII World Congress of Philosophy, Athens, Greece, August 4-10, 2013.

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Vrinceanu D. Accurate quantum states for a 2D-dipole, Meeting of the Division of Atomic, Molecular and Optical Physics of the American Physical Society, Madison,WI, June 2014.

Vrinceanu D. Proton and electron-hydrogen collisions for Rydberg n,l-changing transitions in the early Universe, Department of Physics and Astronomy, University of Kentucky, March 2014.

Vrinceanu D. Proton-hydrogen collisions for Rydberg n,l- changing transitions in the early Universe, 2013 Joint Meeting of the APS and CAP Division of Atomic, Molecular and Optical Physics, Quebec City, Canada. August 2013.

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Yakubu M. Potential therapeutic targets for stroke and traumatic brain injury, 2nd International Conference and Exhibition on Neurology & Therapeutics, Chicago IL, June 17-19, 2013

Yakubu M. Synthesis, Characterization and Toxicity Studies of [Ru2(Aap)4cl]: a Diruthenium Complex. EB2014, FASEB J April 2014 28:655.12.

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Chen X, L Yu, and Y Wang. Analyzing the Effect of Bus Rapid Transit Policy Strategies on CO2 Emissions: Case Study of Beijing. 93rd Transportation Research Board Annual Meeting CD-ROM, Transportation Research Board of the National Academies, Washington, DC, Jan 2014.

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Lai J, L Yu, G Song and X Chen. Emission Characteristics of Heavy-duty Diesel Transit Buses at Intersections of Urban Area: A Case Study In Beijing. 93rd Transportation Research Board Annual Meeting CD-ROM, Transportation Research Board of the National Academies, Washington, DC, Jan 2014.

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Qi Y and Z Qun. Safety Impacts of Signalized Lane Merge Control at Highway Work Zones, accepted for presentation and publication in the proceedings of the 92nd Annual Meeting of Transportation Research Board, Washington, DC, Jan 12-16, 2014.

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Qi Y, X Chen, L Yu, H Liu, G Liu, D Li, K Persad, and K Pruner. Development Of Guidelines for Operationally Effective Raised Medians and the Use of Alternative Movements On Urban Roadways, Report No. TxDOT 0-6644-1, final report to Texas Department of Transportation, 2013.

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Zhang F, G Song, L Yu, and Y Gao. Floating Car Data-Based Method for Detection of Flooding Incident Under Grade Separation Bridges in Beijing. 93rd Transportation Research Board Annual Meeting CD-ROM, Transportation Research Board of the National Academies, Washington, DC, Jan 2014.

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Faculty and Staff

Aviation Science and Technology

Bailey, John, Adjunct Instructor
Baker, Vernon, Instructor
Brown, Calvin, Adjunct Instructor
Florent, Gertrude, Admin. Assistant
Hall, Tasjah, Adjunct Instructor
Hudson, Sharon, Academic Advisor
Lewis, Fred, Adjunct Instructor
Lufadeju, Eziekiel, Tech. Svcs. Specialist
Odetunde, Christopher, Asst. Professor
Olowokere, David, Prof. and Int. Chair
Sherman, Mark, Associate Professor

Biology

Abdel-Rahman, Fawzia, Professor
Dike, Cyprian, Adjunct Professor
Fadulu, Sunday, Professor Emeritus
Gardiner, Linda, Asst. Professor
Hillar, Marian, Professor
Hollomon, Mario, Assistant Professor
Jackson, Desirée, Associate Professor
Miranda, Hector C., Associate Professor
Olufemi, Shodimu-E, Assistant Professor
Pittman-Cockrell, Helen, Admin. Assistant
Player, Audrey, Assistant Professor
Rosenzweig, Jason, Associate Professor
Shishodia, Shishir, Associate Professor
Sodipe, Ayodotun, Assistant Professor
Sundaresan, Alamelu, Associate Professor
Williams, Warren E., Associate Professor and Interim Chair

Chemistry

Babatunde, Patience, Adjunct Professor
Clement, Jade Q., Associate Professor
Dang, Bachlien, Adjunct Asst. Professor
Deng, Yuanjian, Professor
Dooley-Renfro, Jamie, Adjunct Asst. Prof.
Ekwere, Obot, Adjunct Asst. Professor
Fennell, Pearlie M., Professor
Johnson, Delois, Admin. Assistant
McDaniels, Vera, Program Coordinator
Saleh, Mahmoud, Professor
Sapp, John B., Professor and Chair
Tolbert, Michelle, LSAMP Coordinator
Turay, Sheku A., Adjunct Asst. Professor
Wei, Xin, Professor
Wilkerson, Daryl, Instructor
Wilson, Bobby L., Professor

Computer Science

Abdullah, Baqui, Network Administrator
Abrar, Max, Adjunct Instructor
Criner, Oscar H., Professor
Dixion, Aericka, Sr. Admin. Asst., CREST
Ghemri, Lila, Associate Professor
Handy, Maribel, Instructor
Jahed, Nadareh, Admin. Assistant
Javadian, Moshen, Associate Professor
Joyner, Mackale, Adjunct Asst. Professor
Kamel, Khaled, Professor
Khan, M. Farrukh, Assistant Professor
Li, Wei Wayne, Professor and Int. Chair
Lin, Cheng Feng, Assistant Professor
Pan, Miao, Assistant Professor
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Wanyan, Yaki, Assistant Professor

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Wu, Tong, Instructor

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Jerke, Jonathon, Postdoctoral Fellow, CREST
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Carter, Minerva, Project Coordinator I, ITRI
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Eakins, Paula, Administrative Assistant
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Lashore, Denita, Sr. Administrative Asst.
Lewis, Carol, Professor, Director of CTTR
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Mckamie, Reginald, Adjunct Instructor
Miller, Michael, Visiting Instructor
Puccini, Giovanni, Adjunct Instructor
Qi, Yi, Associate Professor and Chair
Qiao, Fengxiang George, Asso. Professor
Rollins, Mary, Research Assistant
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3100 Cleburne Street | Houston Texas 77004 | costinfo@tsu.edu