

Environmental Engineering Department News

Texas A&M University-Kingsville

Special Points of interest:

- May Commencement
- AAEE / A&MA Organization Student Chapter Activities
- Graduate Poster Competition Winners
- Student Awards

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EVEN Highlights



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Student Achievements

May 9th Commencement—Students graduating with a **Bachelor of Science** are **Ana Cardona, Iris Facundo-Torres, Eric Faust, Jonathan Gorman, Azia Hinojosa, Paige McIntyre, Andrea Meyer, Ariel Ramirez, Jean Romero, Kai Williams, and Sebastian Winkler.** A **Doctorate of Philosophy** was earned by **Jessica Lee Schnupp.** Congratulations!! (pictured right are some of the BS Graduates!)



May 2014 BS Graduates

The **American Academy of Environmental Engineers and Scientists (AAEES)** and the **Air & Waste Management Association (AWMA)** students joined together on March 1st for **Beach Clean-Up Day.** They cleaned up **Bob Hall Pier** in Corpus Christi, TX. Participates were **Theresa Perez, Iris Facundo, Nereyda Facundo, Robert Salinas, Prajay Gor, Isaac Luera, Carmen Thomas, Steven Thomas, Rashida Sucky, Maria Corona, Ana Cardona, Omar Luna, Ashley Rivera, Juan Martinez, Steven Fonseca, Cole Wilborn, Reyna Chavez, Maegan Saverline and Navi (the Dog).**



Dr. Lucy Camacho and **Dr. Alvaro Martinez** were judges for the College of Engineering Graduate Students' Research Poster Competition. EVEN Poster winners were: - **Volatile Organic Compound Speciation of Crude Oil and Condensate Storage Tank Emissions Using GC-MS** by **Oluwatosin Oyelakin, Theresa Perez/Dr. David Ramirez,** - **Impact of Shale Oil and Gas Development on Summertime Ozone Air Quality in Northern US and Texas** by **Chih-Yuan "Andy" Chang/Dr. Kuo-Jen Liao,** - **Granular Filtration of Aerosols Containing Carbon and Silica Based Nanomaterials** by **Rashida Sucky/Dr. David Ramirez** and—**Feasibility of Using Brackish Groundwater Desalination Concentrate as Hydraulic Fracturing Fluid in the Eagle Ford Shale** by **Nima Ghahremani/Dr. Lee Clapp.** April, 2014.



The **2nd Annual Javelina Regional Research Symposium** took place in April with an estimated 150 research posters on display. **Chih-Yuan "Andy" Chang** placed **1st** in the Doctoral Level and **Rashida Sucky** placed **2nd** and **Carmen Thomas** placed **3rd** in the Master's Level. April, 2014.

2014 Student Awards: PhD: Outstanding Research-Yaneth Gamboa, Outstanding Student-Jessica Schnupp, MS: Outstanding Research-Gerald Ogumerem, Outstanding Student-Aditya Shah, BS: Outstanding Senior-Theresa Perez, Academic Excellence-Eric Faust, Outstanding Service-Iris Facundo-Torres Senior Design Awards: 1st Place (\$800 team) "TSS and O&G Removal from Hydraulic Fracturing Flowback Water" by Ana Cardona, Eric Faust, Jonathan Gorman and Azia Hinojosa. Excellent Job Everyone!!!

Undergrad Corner

If you are interested in joining the **AAEES Student Organization** please contact **Hunter Balzen** (BS) President at tamuk.aees@gmail.com. If interested in joining the **AWMA Organization** please contact **Taylor Tinnell** (BS) President at AWMA.tamuk@yahoo.com.

If you have any questions you can contact our department at 361-593-4330 or send **Cathey Allen** an email at allen@tamuk.edu.

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Dissertation / Thesis Presentations

Jessica Schnupp successfully defended her dissertation titled "[Antimony and Arsenic Fractionation, Partitioning, and Release from Contaminated Streambed Sediment](#)". Advisor: Jianhong Ren. April 2014. (pictured right is Dr. Ren and Dr. Schnupp)



Sheena Neizer, MS defended her thesis proposal titled "[Air Distribution Model of VOC Emissions in the Eagle Ford Shale](#)". Advisor: Alvaro Martinez. April 2014.

Xiangting Hou, PhD defended her dissertation proposal titled "[Optimization of Multipollutant Air Quality Management Strategies in the United States](#)". Advisor: Kuo-Jen Liao. May 2014.

Oluwatosin A. Oyelakin, PhD defended his dissertation proposal titled "[Thermal Swing Adsorption to Capture and Recover Toxic Vapor Emissions from Condensate Storage Tanks](#)". Advisor: David Ramirez. May 2014.

Nima Ghahremani, PhD defended his dissertation proposal titled "[Assessment of Desalination Concentrate as an Alternative Water Supply for Hydraulic Fracturing](#)". Advisor: Lee Clapp. May 2014.

Student Internships / Fellowships

Eva Saenz, BS will be interning with [Invista](#) in Orange, TX as an **Environmental Engineering Intern**.

Samuel Franco, BS will be interning with [SCS Environmental Engineers and Consultants](#) in Austin, TX as an **Associate Staff Professional**.

Gisela Alfaro, MS will be interning with [CP&Y](#) in Austin, TX as an **Engineer** with the water practice group.

Theresa Perez, BS will be interning with [Valero Refinery](#) in Corpus Christi, TX as an **Environmental Engineering Intern**.

Juan Martinez, BS will be a **Research Intern** at the [Center for African Resources: Animals, Communities, and Land Use \(CARACAL\)](#), Botswana, Southern Africa.

Kristen Hernandez, BS will be Studying-Abroad in [Bolivia](#) for the month of June.

Maegan Saverline, BS will be interning with [Flint Hills Resources](#) as an **Environmental Engineering Intern**.

Alumni

[Natalia Rojas](#) (BS Class of '13) is working with [Bureau Veritas North America, Inc.](#) in Houston, TX as a **Risk and Safety Engineer**.

[Oluyinka Elegbede](#) (MS Class of '12) is working with [G2 Partners LLC](#) in Houston, TX as an **Engineer**.

[Debbie Garcia](#) (BS Class of '13) is working with the [Railroad Commission of Texas](#) as an **Engineering Specialist**.

[Dr. Bela Deshpande](#) (PhD Class of '08) is working with [California Air Resources Board](#) in Sacramento, CA as an **Air Resources Engineer**.

[Hernan Lugo, P.E., C.F.M.](#) (MS Class of '11) is working with [R. Gutierrez Engineering Corporation](#) in Pharr, TX as a **Senior Project Manager**.

[Mugdha Nayak](#) (MS Class of '07) is working with [Ansal Institute of Technology](#) in Gurgaon, India as an **Assistant Professor**.

[Kiran Kembhavamathada](#) (MS Class of '11) is working with [REW Group, LLC](#) in Houston, TX as an **Environmental Engineer**.

[Sanjay Sampath](#) (MS Class of '01) is working with [Valero Port Arthur Refinery](#) in Port Arthur, TX as the **Senior Environmental Engineer**.

[Justin Long](#) (MS Class of '13) is working with [GSI Environmental](#) in Austin, TX as an **Environmental Engineer**.

Faculty / Staff News

Dr. Kuo-Jen Liao, Xiangting Hou (PhD) and Debra Ratterman Baker from University of Maryland, had a journal publication in the *Atmospheric Environment* entitled “Impacts of Interstate Transport of Pollutants on High Ozone Events over the Mid-Atlantic United States”. October 2013. journal homepage: www.elsevier.com/locate/atmosenv

Dr. Kuo-Jen Liao traveled to Taiwan to present for the Department of Atmospheric Science at the *National Central University*. His presentation was titled “Impacts of Shale Oil and Gas Development on Ozone Air Quality”. Dr. Liao also gave a presentation titled “Impacts of Shale Oil and Gas Development on the Environment” to the Environmental Engineering Department at the *National Cheng-Kung University*.

Dr. Lee Clapp traveled to San Antonio, TX to present at the *Water Management for Shale Plays Mid-Continent 2014*. His presentation was entitled “Overview of Pearsall Shale Development Activities and their Implications for Water Resources Management in South Texas”. Wei Yang (MS), Nima Ghahremani (PhD), and Seyed Siavash Bassam (PhD) also attended. January 2014.

Saritha Karnae, Res. Eng. Assoc. and PhD candidate was awarded \$162,000 for her project entitled “Corpus Christi Near Non-Attainment Area Research and Planning Activities” (2014-2015) from *University of North Texas*. February 2014.

Dr. Lee Clapp received an amendment for an additional \$13,076 on his HARC project entitled “Modeling Exchange of Gases and Scale-Forming Ions during Shale Fracturing Operations”. Total amount awarded for project is \$113,076. February 2014.

Dr. David Ramirez and Kailas Malwade (PhD) traveled to Dallas, TX for the *247th American Chemical Society National Meeting & Exposition*. Dr. Ramirez was Session Chair for *Emerging Micro-Pollutants in the Environment* and Kailas gave a **platform presentation** entitled “A Comparative Study of the Aqueous-Phase Adsorption of Sulfamethazine onto Commercially Available and Laboratory Developed Activated Carbon”. Dr. Ramirez also served as a Judge for the *Merit Award Program, Environmental Chemistry Division*. March 2014.

Dr. Lucy Camacho’s proposal entitled “Ammonia Removal from a Wastewater Treatment Plant Effluent-Phase II” sponsored by *El Paso Water Utility (EPWU)* was awarded for \$49,984. April 2014

Dr. Lucy Camacho traveled to College Station, TX to participate in a short course titled “Membrane & Other Separation Technologies”, then on to San Antonio, TX to participate in a *RCN-CE3SAR-AISGE AGEP Workshop on Energy and Sustainability*. April 2014

Dr. Alvaro Martinez and Dr. Kuo-Jen Liao were judges for the *2014 Annual Engineering Student Design Conference* held at the Engineering Complex. Several EVEN students participated by presenting posters. April 2014.

Dr. Lucy Camacho, PhD students Johnson Ajedegba, Ehsan Mostavi and Olufunso Adetunji served as judges at the *Science Academy* in Mercedes, TX. April 2014.

Institute for Sustainable Energy and the Environment (ISEE) News

Dr. Kim Jones (PI) and Javier Guerrero (Co-PI) were awarded a \$149,261 grant from *TCEQ* titled “Lower Rio Grande Valley Low-Impact Development Implementation and Education”. February 2014.

Javier Guerrero, Augusto Sanchez and Brianna Saenz organized a *Restore Act Symposium* held at the TAMU-K Citrus Research Center in Weslaco, TX. *Hollis Rutledge & Associates, Inc.* partnered with TAMU-K, the *Lower Rio Grande Valley TPDES Stormwater Task Force, URS Corporation and Grant Thornton*. **Mr. Michael Morrissey**, Deputy Chief of Staff, Office of the Governor was the Keynote Speaker. February 2014.

Soil Erosion Pollution Awareness (SEPA) program of the Lower Rio Grande Valley TPDES Storm Water Task Force, Texas A&M University-Kingsville/Institute for Sustainable Energy and the Environment partnered with *Texas Transportation Institute* (College Station) presented “How to Inspect and Enforce a TPDES Program at Construction Sites” in Edinburg, TX. March 2014.

Institute for Sustainable Energy and the Environment (ISEE) News (Cont.)

The Lower Rio Grande Valley 16th Annual Water Quality Management & Planning Conference was successfully held at South Padre Island. A preconference course and exam was given to obtain the title of **Certified Floodplain Manager**. The conference had over 150 participants, 10 exhibitors and 8 sponsors, all the attendees enjoyed talks from TCEQ, EPA, consulting companies and academia about water quality topics relevant to the South Texas region. April 2014.

Poster competition winners for the LRGV 16th Annual Water Quality Conference were: EVEN Graduates students 1st Place-Mayokun Adekola (\$1000), 2nd Place-Shrey Kankaria (\$500), 3rd Place-Wisdom Ogeheneurie (\$250), and for the Undergraduate posters were 1st Place-Kai Williams (\$500), and 2nd Place—Kristen Hernandez (\$250). April 2014.

ISEE hosted 50 students from Porter High School and Hanna High School from the Brownsville ISD at the 16th Annual Water Quality Conference. The City of Edinburg unveiled its Stormwater Mascot, Sheriff “Agua” during the activities. City Engineers Ponciano Longoria and Omar Cano (mascot) are both Javelina Alumni. (Photo right by Alma Limas) April 2014.



Brianna Saenz, Res. Eng. Assoc. II, took the TFMA (Texas Floodplain Management Association) exam at the 16th Annual Water Quality Conference and is now CFMA certified. April 2014.

Eagle Ford Center Research and Education Outreach (EFCREO)

Dr. Jianhong Ren, Assoc. Professor leads the EFCREO with Clarissa Torres, Engineering Liaison Officer at her side in guiding the research activities. Currently, several faculty members in the Dotterweich College of Engineering are working on research that could have significant benefits for the Eagle Ford Shale and the natural gas industry. With an overarching goal of minimizing impact to the environment, areas of research include control of emissions, the re-use of frack-water and developing more cost effective technology for industry.

Dr. Jones said environmental engineers and natural gas and oil companies are primed to work together for smart development in several different areas that range from brackish water recycling to air emissions monitoring. Environmental Engineering can help industry meet the environmental challenges associated with rapid Eagle Ford Shale development with waste treatment biological methods that are more sustainable. There is a real opportunity to develop these resources wisely, to enhance the quality of life for South Texas communities.

A **Public Awareness of Pipeline Safety Workshop** was held in Cotulla, TX with over 200 attendees representing industry, local government, first responders, law enforcement, school districts and area citizens. April 2014.

Mr. Tom Tagliabue, Director, Intergovernmental Relations and Mr. Brent Clayton, Water Project Manager with the City of Corpus Christi presented a seminar on **Water Related Issues for the EFCREO**. April 2014.

Upcoming Events

YESTexas Young Engineers of South Texas Summer Camp will be held June 16th -20th. —YESTexas is for area school students to develop math, science and engineering concepts by participating in hands-on engineering projects and technical activities. This camp is for students (6th grade or higher) who are interested in engineering.

Environmental Engineering Advisory Board meeting for ABET is set for July. Mr. Brian Flynn, P.E., BCEE, President of MRE Associates has agreed to serve as Chair of the Advisory Board Committee.



Go Javelina's !!!!