



Breaking news about water resources research and education at Texas universities

January 31, 2008

Texas A&M University Distinguished Lecture Series scheduled

Multi-Scale Processes in Earth Systems, a distinguished lecture series hosted by Texas A&M University's Departments of Biological & Agricultural Engineering, Civil Engineering, Petroleum Engineering, Atmospheric Engineering, Geology & Geophysics, Mathematics, Ecosystem Science & Management and Water Management & Hydrologic Sciences, is continuing in the spring semester. The lectures begin with a reception at 3:30 p.m. in Scoates Hall foyer on the A&M campus with the presentation following at 4:10 p.m. in Scoates Hall, Room 208.

Lectures for the spring semester are:

- February 13, **Dr. Phil Jardine**, Oak Ridge National Laboratory, "Lab Contaminant Transport"
- February 20, **Dr. Larry Lake**, The University of Texas at Austin, "Reservoir Engineering"
- March 5, **Dr. Levent Kavvas**, University of California, Davis, "Hydrology"
- March 19, **Dr. Soroosh Sorooshian**, University of California, Irvine, "Hydrometeorology"
- April 16, **Dr. Keith Loague**, Stanford University, "Hydrogeology/Contaminant Transport"

For more information, visit the [Biological and Agricultural Engineering Web site](#) or call 979.845.3931.

BAEN department seeking doctorate students for USDA fellowships

The [Biological and Agricultural Engineering Department](#) at Texas A&M University is recruiting qualified minority students for three U.S. Department of Agriculture National Needs Ph.D. Fellowships to study water quality research. Students must be African-American, Hispanic or American Indian and be U.S. citizens or permanent residents.

The fellowships are for \$24,000 a year for three years. In addition, each minority doctorate candidate will receive a \$34,000 scholarship from the Alfred P. Sloan Foundation. Candidates for these fellowships must have completed a master's degree in a water, soil or environmental discipline and can be engineering or non-engineering students.

For more information, contact Dr. Clyde Munster, professor, at c-munster@tamu.edu or 979.847.8793.

2008 AgriLife Conference Award Winners

The 2008 Texas A&M AgriLife Conference brought several Rio Grande Basin Initiative individuals and teams award recognition for their efforts in this and other projects.

Dr. Daniel L. Leskovar, Texas AgriLife Research and Extension Center at Uvalde, received the 2007 Vice Chancellor's Awards in Excellence—Research Individual, off-campus; **Dr. Bruce J. Lesikar**, Department of Biological and Agricultural Engineering, Texas AgriLife Extension Service, received the 2007 Vice Chancellor's Award in Excellence—Extension Education and Service Specialist; **Allen W. Sturdivant**, Texas AgriLife Research and Extension Center at Weslaco, received the 2007 Vice Chancellor's Awards in Excellence—Support Personnel, Technical/Extension, Off-Campus, and the 2007 Superior Service Awards, Texas AgriLife Extension Service Extension Associate/Assistant/Technician.

A 2007 Superior Service Awards, Texas AgriLife Extension Service Team Award went to the *Nutrient Management Education in the Rio Grande Valley* team of **Brad Cowan**, county Extension agent-Agriculture and Natural Resources, Hidalgo County; **Dr. Mark McFarland**, professor and soil fertility specialist; **Omar Montemayor**, county Extension agent-Agriculture and Natural Resources, Starr County; **Enrique Perez**, county Extension agent-Agriculture and Natural Resources, Cameron County; and **Dr. Tony Provin**, associate professor and soil chemist.

Emily Seawright won first place in the undergraduate category for her poster, *Preliminary economic Analysis of Biological Control for Giant Reed (Arundo donax) in the Rio Grande Basin*. **Andrew Leidner** won first place in the graduate category for his poster, *Economic Implications of Conventional Water Treatment Versus Desalination: A Dual Case Study*. Shauna Yow and her poster, *Water Market Distortions Created by Legislation*, were mentioned in a speech by State Rep. Dan Gattis. **Dr. Ed Rister** of the Department of Agricultural Economics is faculty advisor for all three students.

Effects of climate change on Texas water resources conference set

The [River Systems Institute](#) is hosting "Forecast: Climate Change Impacts on Texas Water," April 28-30, 2008, at the Texas State Capitol Extension in Austin.

The conference is being co-hosted by [Texas Water Resources Institute](#), an entity of Texas A&M AgriLife, and [Environmental Sciences Institute](#) at The University of Texas at Austin. Co-sponsors include [Guadalupe—Blanco River Authority](#), [Lower Colorado River Authority](#), [Magnolia Charitable Trust](#), the [Jackson School of Geosciences](#) at The University of Texas at Austin, [National Oceanic and Atmospheric Administration](#) and [U.S. Geological Survey](#).

The conference will take a comprehensive look at what is known about climate change and what needs to be known to prepare for the local impact on Texas water resources and on the communities, both natural and human, that depend on them.

The conference will feature national climate change scientists who have conducted cutting-edge work in the prediction of global warming and the impending changes on the earth's climate and state scientists who are working to understand the impact on Texas and its water resources.

Speakers include **Drs. Warren Washington**, National Center for Atmospheric Research; **Connie Woodhouse**, University of Arizona's Department of Geography and Regional Development; **Gerald North**, Texas A&M University's Department of Atmospheric Sciences; **Bruce McCarl**, Texas A&M's Department of Agricultural Economics, and Nobel Prize winner for

his participation in the International Panel on Climate Change; and **Ruby Leung** of the Pacific Northwest National Laboratories.

Early registration continues until Feb. 15 and is \$150. General registration, from Jan. 12-March 30, 2008, is \$175, and late general registration, from April 1-28, 2008 is \$200. Student registration is \$35 a day.

The conference will also have a poster session for professionals and students (see next story).

For more information, visit the conference [Web site](#) or contact Annette Paulin, conference coordinator, at 512.754.9179 or CCTW08@grandecom.net.

Climate change conference calls for posters

Professionals and students may submit posters of their research for the upcoming conference, "Forecast: Climate Change Impacts on Texas Water." The conference is at the Texas State Capitol Extension April 28-30, 2008.

The professional poster session provides researchers an opportunity to highlight recent or current research in the field of climate change.

Students currently enrolled in degree programs related to meteorology, aquatic and terrestrial biology, water resources, geography, agriculture and other fields related to how climate change may affect water resources may submit an abstract on research conducted over the past two years. Posters should address climate change impacts on natural systems or human environments, tools and technology to detect and protect climate change, water resources policy and management, or water resource science.

A limited number of winning posters will be displayed during the conference. Conference registration will be waived for the students presenting the selected posters.

Professionals and students must submit a conference registration form and a poster abstract submission form by **March 15, 2008**. Forms are available on the TWRI Web site at <http://twri.tamu.edu/downloads/ClimateChangeConferenceRegistration-CallForPosters.pdf>. Authors will be notified if their poster was selected by March 25.

Irrigation association meeting to address limited water availability

The [Texas Agricultural Irrigation Association](#)'s South Texas Conference will focus on limited water availability issues when it meets Feb. 19 at the Texas AgriLife Research and Extension Center at Uvalde.

The meeting, scheduled from 9 a.m. to 3 p.m. is free and open to the public, said **Dr. Giovanni Piccinni**, AgriLife Research associate professor of crop stress physiology and meeting coordinator. The program will focus on the latest in irrigation technology, management and scheduling. "We will be looking at in-season and long-term irrigation solutions for those with limited water availability," he said.

Program topics will include managing irrigation for efficiency; in-season irrigation management; precision irrigation of row crops; the pros and cons of selling water; and economics of water

application in South Texas. There also will be a small exposition by irrigation product providers, as well as a field tour with an irrigation technology demonstration.

"The wise and efficient use of limited water resources is one of the greatest challenges to producers in this region and throughout Texas," said Piccinni, program manager for the center's Precision Irrigators' Network program.

To read the complete Ag News story, click [here](#).

Texas A&M University-Kingsville professors publish climate change book

A recently published book on climate change for South Texas, "The Changing Climate of South Texas 1900-2100: Problems and Prospects, Impacts and Implications," was co-edited by two research professors at [Texas A&M University-Kingsville](#): **Dr. James Norwine**, Regents professor of geography, and **Dr. Kuruvilla Johntwo**, Frank H. Dotterweich College of Engineering associate dean. The book features chapters written by leading scholarly authorities on the effects of climate change on the region's coastal areas, water resources, air quality, ecology and wildlife.

The co-editors and authors use the latest climate data to sketch an outline of what the South Texas region will look like as the 22nd century begins. They predict more frequent heat waves in summer, fewer hard freezes in winter, more prolonged periods of drought, worsening air quality and more extreme individual rainfall events for 2100 in South Texas - a region already known for its unforgiving climate.

"Readers get a fair, understandable depiction of the most current scientific climate data about our area," Norwine said in a university news release. "We also are clear in categorizing our predictions as hypotheses, noting those in some areas that are untested."

Norwine and Johntwo call climate change "...a regional challenge which we believe is the greatest test South Texas has faced since its first human inhabitants arrived 10 or so millennia ago."

Contributors include **Dr. Ralph Bingham, Dr. Jhumoor Biswas, Dr. Leonard Brennan, Dr. Kim Jones, Gomathishankar Parvathinathan, Dr. Venkatesh Uddameri, Irama Wesselman** and **Dr. Jaehyung Yu**, all of Texas A&M-Kingsville; **Dr. Gene Blacklock** of the Coastal Bend Bays and Estuaries Program; **Dr. James Gibeaut** of The University of Texas at Austin; **Dr. Robert Harriss** of the Houston Advanced Research Center; **Dr. Paul Montagna** and **Dr. John Tunnell Jr.**, both of Texas A&M University-Corpus Christi; **Dr. Gerald North** of Texas A&M University; **Dr. John Rappole** of the Smithsonian Zoological Park Conservation and Research Center; and **Dr. Claudia Tebaldi** of the National Center for Atmospheric Research.

To read the Texas A&M-Kingsville news story, click [here](#).

Tools help producers identify water quantity and availability

Leon New, Texas AgriLife Extension Service irrigation specialist, told producers at the High Plains Irrigation Conference held recently in Amarillo that only a certain amount of water is available for commodity crops.

However, there are a number of tools available that will help producers identify how much water they have available and when to apply it to address peak water-use periods, he said.

"You need to know your seasonal irrigation capacity and then you're going to make a decision on where your water is going," New said.

The [Texas High Plains Evapotranspiration Network](#) of weather stations can help producers determine how much water a crop needs throughout the growing season, as well as how much is being derived from rainfall, he said.

To read the complete AgNews story, click [here](#).

TWCA convention set for March

The [Texas Water Conservation Association](#) annual convention is set for March 5-8 at The Woodlands Waterway Marriott Hotel in The Woodlands. The convention features sessions about brackish groundwater desalination activities, national climate change policy, case studies of groundwater and surface water management and groundwater law. **Joey Longley**, executive director of the Sunset Commission, will give an overview of the process to "sunset" state agencies.

Other scheduled speakers include **State Rep. Brandon Creighton**, **State Sen. Glenn Hegar**, **Texas Commission of Environmental Quality Commissioner Bryan Shaw** and **Commissioner Robert Johnson** of U.S. Bureau of Reclamation.

Registration is \$375. To learn more, visit the TWCA Web site.

Texas Water 2008 conference scheduled for March

The [Water Environment Association of Texas](#) (WEAT) and the [Texas Section American Water Works Association](#) (AWWA) are hosting the [Texas Water 2008 conference](#) in San Antonio, Texas, March 25-28, 2008.

Texas Commission on Environmental Quality Commissioner Buddy Garcia will give the convention's opening address on Wednesday, March 26 at 9 a.m. Technical sessions, presented by experts in the industry, are scheduled for March 26-28.

Separations Sciences Lab hosts short course

The Texas A&M University [Separations Sciences Lab](#) is hosting its annual Membrane, Filtration and Separations short course April 6-10, 2008, in College Station, Texas.

The short course provides a broad overview of how membranes can be used for water treatment, especially the desalination of coastal waters, brackish groundwater, and oilfield-produced waters. Sessions of the short course will present an overview about principles of membrane-based treatment methods, challenges associated with membrane fouling, and new research-based technological developments. Speakers include several experts from the desalination industry, agencies and higher education.

To learn more, visit the lab's [Web site](#), call 979.693.7500 or email Carl Vavra at cjvavra@tamu.edu

New Projects

Fate and Transport of *E. coli* in Rural Texas Landscapes and Streams

This project will identify, characterize, and quantify *E. coli* from various sources in an impaired watershed; monitor survival, growth, regrowth and die-off of *E. coli* under different environmental conditions; monitor re-suspension of *E. coli* in streams; educate stakeholders on bacterial issues; and strengthen modeling tools used in Total Daily Maximum Load development.

Principal Collaborators: Texas Water Resources Institute, Texas AgriLife Research, Texas AgriLife Extension Service

Funding Agency: Texas State Soil and Water Conservation Board

Harris County Water Quality Project

This project will study priority water quality issues in Harris County bayous and wetlands. Researchers will develop and present three staff seminars on soil and nutrients, basic microbiology and innovative wastewater treatment plant designs; will study fish as sources of *E. coli* bacteria in warm water streams; will study the influence of the Waugh Street bat colony on indicator bacteria levels in Buffalo Bayou; and will quantify load reductions resulting from constructed wetlands at Mason Park in Houston, Texas.

Principal Collaborators: Texas Water Resources Institute, Texas AgriLife Research, Texas A&M University, University of Houston—Clearlake

Funding Agency: Harris County

New Publications

[Land Application of Organic Fertilizers or Amendments](#)

Darren Harmel, Justin Mechell and Bruce J. Lesikar, Texas Cooperative Extension Publication L-5493.

Applying organic materials to your land can add beneficial nutrients to the soil. But when too much is applied, or when it is applied incorrectly, organic material can cause environmental problems. This publication will help you select the proper application rate, calibrate equipment so that the correct rate is applied, and learn how location, water, soil and tillage can all affect the process.

"**New Waves**," an email newsletter of Texas Water Resources Institute, a unit of Texas AgriLife Research and Texas AgriLife Extension Service, publishes timely information about water resources news, results of projects and programs, and new water-related research projects, publications, papers and faculty, at universities in Texas. If you have information for possible inclusion in "New Waves" please email [Kathy Wythe](mailto:Kathy.Wythe) or call 979.845.1862 and include your contact information. All submissions may be edited for grammar and style.

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