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# RESEARCH TRACKS

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## Baylor professor organizes international course on air quality research

When the world's largest cities encroach on surrounding agricultural land, pollution from the two areas combines to produce a variety of effects. While significant research has been done on the effects of pollution in these areas individually, there has been relatively little study of what happens at the interface between agricultural areas and mega-cities, dense urban areas containing 5 million people or more.

To help address this gap in knowledge, the Society of Environmental Toxicology and Chemistry (SETAC) is hosting an international course for young scientists with an interest in air quality. The course is sponsored in part by a grant from the National Science Foundation's Pan-American Advanced Studies Institute (PASI) program.

The PASI program funds courses that bring together graduate students, postdoctoral scientists and established investigators from North and South America to discuss important problems in science and engineering.

Dr. George Cobb, chair of the Department of Environmental Science, is the president of SETAC North America and the event's organizer. He said students and instructors at the course will work to address a number of issues, including the reactions that can occur when nitrogen oxides, hydrocarbons, and other urban pollutants come into contact with fertilizers and pesticides.

"Most mega-cities are emerging in developing countries," he said, "so by definition they are encroaching on subsistence agriculture. These reactions are causing effects that we don't yet understand."

Dr. Cobb said the primary product of the course will be a white paper that outlines the current state of the science and identifies avenues for future research. He said the course is also intended to encourage collaborations and set up a community of scientists to engage the issues.

Nearly 30 graduate students will attend the course, with several experienced researchers serving as instructors. Students and instructors were selected from a variety of institutions to ensure a diverse mix of participants.

"It's important to the NSF to reach young scientists in the early stages of their careers," said Dr. Cobb. "The program puts young scientists and established investigators together so they can learn from each other's perspectives."

Dr. Cobb's involvement positions Baylor at the forefront of research on this emerging area of science and helps create relationships that may lead to future collaboration with participants and their home institutions.

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## Proposal Development Workshop: science section full, seats available in humanities

Because of the outstanding response to the second-annual proposal development workshop, all seats in the science section are now full, and further registration is on a wait-list basis.

Seats are still available in the humanities section. [Click here](#) to register.

The humanities seminar takes place January 6, 2012, in the Baylor Sciences Building.

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OFFICE OF THE VICE PROVOST  
FOR RESEARCH

## Internal grant deadlines February 8, 29



The OVPR would like to remind faculty of the deadlines to apply for internal grant funding through the Faculty Research Investment Program (FRIP), Young Investigator Development Program (YIDP), University Research Committee (URC) and Undergraduate Research & Scholarly Achievement (URSA) programs.

Applications for the FRIP, YIDP, and URSA programs are due on February 8, 2012. The deadline for the URC program is February 29, 2012.

[Click here](#) for more information about each of these programs.

To begin the application process, contact your department's assigned [OSP coordinator](#).

## URSA Scholars Week application deadline February 27

All students who received funding through the URSA small grants program in the 2011-2012 academic year are required to present the results of their work at the 2012 URSA Scholars Week.

Students who wish to present must first submit an application to their department chair no later than Monday, February 27, 2012. Applications must be submitted electronically using the Scholars Week [application form](#).

While students who received URSA grant funding are required to participate, all undergraduate students who have undertaken research or scholarly projects outside the classroom are encouraged to apply to present their work as well.

Scholars Week will take place the week of March 26-30, 2012.

Keep an eye on the Scholars Week [website](#) for more information, or contact the OVPR at 254-710-3763 with any questions.



### Research facilities

## Department of Geology dedicates new laboratory facility

A new laboratory facility in the Baylor Sciences Building is helping Baylor researchers learn more about the geologic history of rock samples collected in the field.

In November, the Baylor Department of Geology dedicated the Thomas T. Goforth Paleomagnetism Laboratory, which features a superconducting rock magnetometer.

The lab is named for Professor Emeritus Dr. Tom Goforth, who served the geology department from 1987 until his retirement in 2007, including nine years as department chair.

Dr. Dan Peppe, assistant professor of geology, said that the new equipment will help him and other Baylor researchers more precisely determine the age of rocks and

the location where they formed by measuring the magnetic signature of the samples.

“When rock forms, iron and other magnetic materials line up toward the Earth’s magnetic north pole,” he said. “Since we know that Earth’s magnetic field has reversed periodically throughout the planet’s history, determining the orientation of magnetic materials in the rock helps us to determine how old the rock is.”



Dr. Peppe studies paleobotany, paleomagnetism, and paleoclimate. In addition to studying the Earth’s magnetic field, he also reconstructs ancient environments using fossil remains of plants and studies modern leaves to better understand how the size and shape of leaves are related to climate.

The new facility was made possible by a gift from Dr. Kenneth Carlile. Dr. Carlile earned his Ph.D. in geology at Baylor in 1996 and currently serves on the university’s board of regents.

The lab helped to make Baylor one of only ten universities included in the Rock And Paleomagnetism Instrument Development (RAPID) Consortium.

*(left, Ken Carlile, Tom Goforth and Dan Peppe with the superconducting rock magnetometer at the lab’s dedication)*

## Archival research sheds new light on nineteenth-century rhetorical education

Dr. Michael-John DePalma, assistant professor of English, studies the intersection of rhetoric and religious education in the nineteenth century. His recent archival research at the nation's oldest graduate seminary has helped to more fully acknowledge the contributions of Austin Phelps, a nineteenth-century seminary professor and key figure in rhetorical history.

With support from the OVPR's Arts & Humanities Research Development Program, Dr. DePalma traveled to Andover-Newton Theological School in Newton Centre, Massachusetts,

where he examined lecture notes, letters, and other records related to Phelps and his graduate students.

While some researchers have viewed the nineteenth century as a period of decline in rhetorical education, Dr. DePalma said that his research aims to provide a more nuanced understanding.

"Many histories of rhetorical education have been based on studies of teachers and students in undergraduate settings," he said. "Because of this focus, a wide array of valuable educational practices have been ignored. This research seeks

to expand the canon of rhetorical history and provide a broadened understanding of how professional rhetoric was taught, learned, and practiced in nineteenth-century America."

Dr. DePalma's research resulted in an article which has been accepted for publication in *Rhetoric Review*, a leading journal in the field. He plans to continue his research by examining the history of the debate club that Phelps oversaw and by studying the later influence of Phelps's students – over 40 of whom went on to become professors of rhetoric themselves.

### Funding alert service

## COS Pivot provides enhanced funding opportunity searches

COS Pivot is an enhancement to the existing COS database that makes it easier for faculty to locate relevant funding opportunities.

Previously, faculty members had to manually create their COS profiles with keywords, research interests, and publications. Now, COS Pivot automatically scans university websites and creates profiles based on the information in these publicly available profiles.

The new Pivot Advisor feature then takes the information in the automatically-generated profiles and uses proprietary algorithms to match faculty members with relevant funding opportunities.

To start using COS Pivot, log in at <http://pivot.cos.com> (existing COS users can use their COS username and password). After logging in, your name should be displayed in the upper right-hand corner. Click

"Claim Profile," then click "This is me" next to your name in the list on the next page.

Pivot will confirm your identity with an email verification, then you will be able to update your profile information or view your current Pivot Advisor results.

COS provides webinars to help you learn more about using Pivot. [Click here](#) to view a list of live and recorded webinars.

### NSF MRI Program

## NSF Announces Major Research Instrumentation Program Webcast

The National Science Foundation will hold an informative webcast regarding the Major Research Instrumentation Program on Tuesday, December 6 from 1:00 - 3:30 PM CST.

During the webcast, MRI program officers will discuss the current solicitation and answer questions from prospective applicants.

The webcast is free, but prior registration is required. [Click here](#) to register for the webcast.

The MRI program limits the number of applications that an institution may submit, so the OVPR holds an internal competition to determine the Baylor applicants.

The internal deadline to apply for the MRI program is Thursday, December 15.

[Click here](#) for more information about applying for this and other limited submission opportunities.



## Federal Grants

Opportunity Title	Due Date
* <a href="#"><u>NSF - Major Research Instrumentation: Instrument Acquisition or Development</u></a>	12/15/2011 (Internal LOI)
<a href="#"><u>NEH - America's Historical and Cultural Organizations</u></a>	01/11/2012
<a href="#"><u>NSF - Social Psychology Program</u></a>	01/15/2012
<a href="#"><u>NEH - National Digital Newspaper Program</u></a>	01/17/2012
<a href="#"><u>NSF - Law and Social Sciences</u></a>	01/24/2012
<a href="#"><u>NASA - Astrophysics Research and Analysis</u></a>	01/27/2012 (LOI)
<a href="#"><u>NSF - Science, Technology, and Society</u></a>	02/01/2012
<a href="#"><u>NIH Exploratory Grants for Behavioral Research in Cancer Control</u></a>	02/12/2012
<a href="#"><u>NSF - Fluid Dynamics</u></a>	02/15/2012

## Foundation Grants

Opportunity Title	Due Date
* <a href="#"><u>Camille &amp; Henry Dreyfus Foundation - Teacher-Scholar Awards (Chemical Sciences)</u></a>	12/26/2011 (Internal LOI)
<a href="#"><u>Robert Wood Johnson Foundation - The Future of Nursing: Campaign for Action</u></a>	01/03/2012
<a href="#"><u>William T. Grant Foundation - Investigator Initiated Grants (Youth development)</u></a>	01/05/2012
<a href="#"><u>Holocaust Educational Foundation - Research Grant</u></a>	02/28/2012
<a href="#"><u>Autism Speaks - Research Awards for Basic and Clinical Research</u></a>	03/15/2012
<a href="#"><u>Lyndon Baines Johnson Foundation - Grants-in-aid of Research</u></a>	03/15/2012

\* - Limited submission opportunities. [Click here](#) for application information

## Questions?

If you'd like to apply for these or other specific opportunities, contact your department's assigned [OSP coordinator](#). For questions about searching for funding or setting up funding alerts, contact [Blake Thomas](#) at 254-710-3153.