

Spring Meeting 2012

The Joint Spring 2012 Meeting of the Texas Section APS, Texas Section of the AAPT & Zone 13 of SPS will be held on March 22-24, 2011 in San Angelo. The meeting will be hosted by the physics department of Angelo State University. Important deadlines are:

- Abstract Submission Deadline - February 17, 2012
- Early Registration Deadline – March 1, 2012

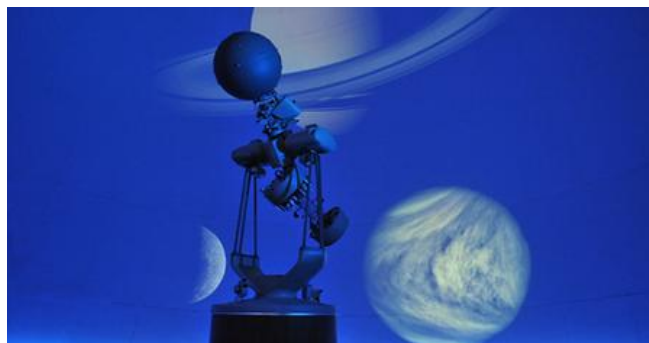
The meeting will feature general sessions on the Frontiers of Physics and Innovations in Physics Teaching. There will be sessions of APS, AAPT, and SPS contributed papers on a wide variety of topics. A special session on care and maintenance of thriving undergraduate physics programs is planned and contributors are encouraged.



Special events. The very active Angelo State Society of Physics Students will host a “Welcome to West Texas” reception barbeque on Thursday

March 22, beginning at 6pm. All meeting registrants are invited, but are asked to RSVP upon registration.

The plenary sessions will include a presentation by [Dr. Cecile DeWitt-Morette](#) from UT Austin “[The Pursuit of Quantum Gravity](#)”, and in an effort to address and highlight opportunities for growth in undergraduate physics programs, presentations by Dr. [Robert “Bob” Hilborn](#) (associate executive officer of AAPT) “Undergraduate Physics”, and by [Crystal Bailey](#) (APS education) “Careers, Education, and Diversity”. The Friday evening banquet speaker is [Susan Cummins Miller](#). She is a writer, geologist and lecturer at Arizona State University. The title of her presentation will be “My Strange Journey from Geologist to Mystery Fiction”. Following the banquet, conference attendees are invited to experience the newly outfitted Angelo State planetarium facility.



Newly renovated ASU Planetarium: Unique combination of a Sci-Dome HD digital projector and a large tilted dome theater.

There will be a special session focused on *Physics Careers and Pathways* for undergraduate students, featuring invited speakers Gary White, Ph.D. – Director of Society of Physics Student/Sigma Pi Sigma and APS Fellow, along with Kendra Redmond, M.S. – Society of Physics Students Program director and Assistant Editor for the Observer and Radiations and George James, Ph.D.

- Aerospace Engineer, NASA Johnson Space Center. The session will focus on career options for physicists at all levels. The roundtable discussion to follow the invited talks will focus on how physics department mentors around the state can leverage this information into recruitment and retention efforts.

The meeting website is:

<http://tesla.angelo.edu/~spsweb/tsaapt/index.html>

Registration is formatted for online access through the APS meetings service via a link on the meeting website. TSAPS, TSAAPT and SPS abstracts must be submitted through the TSAPS website. Please note that there are appropriate sorting categories for all contributors, including categories for AAPT, SPS Outreach and SPS Research (for high school and undergraduate students only) :

<http://abs.aps.org/>

SPIN-UP Workshop: Austin, May 4-6, 2012

Do you want to grow your undergraduate physics program? AAPT, in cooperation with APS and AIP and with support from the National Science Foundation, invites faculty teams of 2-3 members from physics departments in Texas to attend a workshop in Austin, May 4-6, 2012. The goal of the workshop is to enable physics departments to build infrastructure that will produce long-term improvements in undergraduate physics programs and to enhance both the number of students studying physics and the quality of student learning. Presentations will be made on approaches that have been found to lead to large increases in the number of undergraduate majors. Each department's team will analyze its current situation and will develop plans to implement sustainable change to meet the department's goals. Registration, lodging, and meals in Austin will be provided for participants by the NSF grant. See uteach.utexas.edu/Spin-Up2012 for the draft program, registration form, and hotel reservation form. Please apply by February 15th (space is limited).

Report Fall 2011 meeting in Commerce

The Fall 2011 meeting was organized at TAMU-Commerce in Commerce and took place from October 6-8, 2011. The local organizer was Dr. Carlos Bertulani. Two hundred and five papers were presented, with 144 contributed talks, 51 posters, and 10 invited talks. The keynote speaker was Dr. Raymond Orbach the director of the Energy Institute of the University of Texas at Austin. Dr. Orbach's presentation, "[Our Sustainable Earth](#)", gave an overview of global warming and discussed several technical solutions on how we can reduce our carbon footprint [1].



Students assist Professor Randall Scarlise of SMU with his banquet presentation.

A special session on recruitment of students from underrepresented groups into physics featured three speakers who have developed innovative approaches to increasing diversity. Underrepresented groups constitute a largely untapped intellectual resource and a growing proportion of the U.S. population. Dr. Theodore Hodapp, Director of Education and Diversity at APS, described the APS Minority Bridge program. Dr. Eric Brewe, Professor of Physics at Florida International University, described a program at FIU that has greatly increased the numbers of minority students in physics. Professor Richard Tapia described the math PhD program at Rice University, which has produced more math PhDs

who are Hispanic and African-American than any other university in the country. [Professor Tapia's](#) accomplishments in educational diversity and computational optimization methods were recognized in October 2011 by the award of the nation's highest honor in science, the National Medal of Science. The slides from the special session are available online:

<http://www.aps.org/units/tsaps/governance/minorityrecruit.cfm>.

The banquet speakers were Drs. John Cotton and Randall Scarlise from Southern Methodist University who provided an entertaining presentation about "critical and scientific thinking".



2011 undergraduate Hyer-award recipients: Nelson Cardenas (middle) together with advisor Dr. Samarendra Mohanty (right) and TSAPS chair Dr. Mario Diaz.

The invited talk of Dr. Mustapha Ishak-Buoshaki, "Why is the Expansion of the Universe Accelerating?" had a perfect timing, just a couple of days after Stockholm announced [the 2011 Nobel-prize for Physics](#). Dr. Ching-Hwa Kiang (Rice University), Dr. Robert Tribble (Texas A&M University), Dr. Gary White (American Institute of Physics), and Dr. Donald Winet (The University of Texas) completed the list of invited distinguished physicists of the Fall meeting in Commerce.



2011 graduate Hyer-award recipients : Ming Lei and advisor Dr. Michael Downer (UT-Austin).

During the banquet, the chair of the Texas section, Dr. Mario Diaz, announced the Hyer award winners for 2011. Nelson Cardenas and advisor Dr. Samarendra Mohanty from UT-Arlington, received the 2011 undergraduate Robert S. Hyer research award. Nelson combined novel digital holographic techniques and optical tweezers to study the stretching of red blood cells. The graduate award went to UT Austin student Ming Lei and his advisor Dr. Michael Downer for their work on hot carrier injection by internal photoemission from nanometer thick silicon-on-insulator films measured by optical second harmonic generation.



Dr. Raymond Orbach at the 2011 Fall meeting.

The meeting was attended by over 341 registered participants including ~70% students. This was the first time that the national APS office handled the on-line registration process, which gave the organizing committee more time to focus on the program of the conference. The Texas Section thanks Texas A&M University at Commerce and the organizing committee for a job well done. The organizing committee consisted of: Drs. Carlos Bertulani, Cheri Davis, Bao-An Li (TAMU at Commerce), Robert Glosser (UT Dallas), Christopher Littler (UNT), Joe Natowitz (TAMU, College Station), and Fred Olness (SMU).

[1] Raymond L Orbach, Our sustainable Earth, Rep. Prog. Phys. 74 (2011) 112801 (16pp).

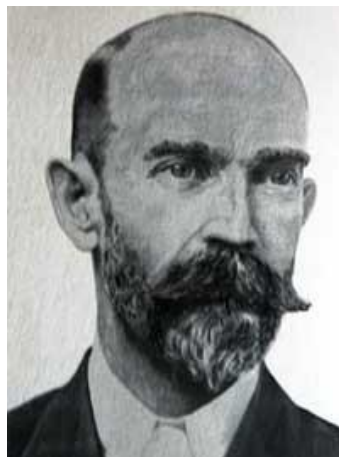
THECB Considering New Physics Coalition

This fall the Texas Higher Education Coordinating Board (THECB) required a number of public universities to stop offering physics degrees because their numbers of graduates were deemed too low. Although there were serious losses in the number of public universities that will be allowed to offer an independent physics degree, the THECB staff is meeting with nine universities to form a coalition that will offer bachelor's degrees. This coalition would use distance education to provide an efficient way of educating physics students. Details of the coalition are still under negotiation, but the Board discussion referenced the pressure applied by the physics community and the importance of science fields to the state economy as factors.

The board adopted rules in April 2010 that any program producing fewer than 25 bachelor's level graduates in a five-year period or fewer than 15 master's degrees in a five-year period would be cancelled. THECB decisions resulted in five physics degree programs on two-year probation and the closure of six bachelor's degree programs and one master's degree program across the state.

The nine universities participating in the coalition discussions are Midwestern State University, Prairie View A&M University, Tarleton State University, Texas Southern University, Texas A&M University – Central Texas, Commerce, Corpus Christi and Kingsville and West Texas A&M University. To learn more about the details of these changes in the state climate for public higher education, we encourage faculty to attend the Texas Section meeting. Please feel free to contact Dr. [Heather Galloway](#) for more information about this issue.

2012 Robert S. Hyer Research Award



Since 2007, the section awards the Robert S. Hyer (photo) Research Award to a student and his/her adviser for their research. The only criterion is the quality and potential impact of the research. Although originally only one award was made, since 2008 separate undergraduate

and graduate Hyer Research awardees have been selected. To be eligible the work needs to have been presented at a Texas Section meeting during the last two years, and both the student as well as the advisor needs to be a member of the Texas Section. The nominations are ranked by a committee consisting of three Texas faculty (currently: Dr. Ramon Lopez (UT Arlington), Dr. Marjorie Corcoran (Rice University), and Nobel laureate Dr. David Lee (TAMU). The nomination/application deadline for 2012 Robert S. Hyer award is May 1, 2012. More information and the nomination can be found at:

<http://www.aps.org/units/tsaps/awards/hyer/index.cfm>

UT-Arlington Professor receives 2012 Edward A. Bouchet Award

Dr. Ramon Lopez (photo) from UT-Arlington received the 2012 Edward A. Bouchet Award for his contributions to the understanding of magnetic storms, substorms, and solar wind-magnetosphere coupling, his communication of space science to the public, and his extensive work in physics education at all levels. This national award was established in 1994 by APS and recognizes each year a minority physicist that has made significant contributions to physics research. Dr. Lopez is also active within the Texas Section as chair of the Hyer award committee.



Member-at-Large: Sacha Kopp
University of Texas, Austin

Member-at-Large: Marjorie Corcoran
Rice University, Houston

Member-at-Large: Jennifer Steele
Trinity University, San Antonio

See you in San Angelo!
Carlos Bertulani, Harry Swinney, Heather Galloway,
and Wim Geerts, editors.

Disclaimer: The articles found in this issue of the APS Texas Section Newsletter are not peer refereed and represent solely the views of the authors and not necessarily the views of APS.

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