

Southern California Section
Fall Section Meeting – November 5th

The Fall Meeting of the Southern California Section was held Saturday, November 5th at California State University Dominguez Hills. Attendees were welcomed to the meeting by SCAAPT president Jeff Phillips and Laura J. Robles, Dean of the College of Natural and Behavioral Sciences at Dominguez Hills. Special thanks are due to local host John Price for arranging the meeting site and to the physics department for providing morning refreshments. About 65 people attended.

Dr. Jim Hill < jhill@csudh.edu > from CSU Dominguez Hills gave the morning invited talk **"Preparation For Undergraduate Physics Majors: Anecdotes and Ideas"**

Dr. Hill described that while the main features of physics BS curriculum have not changed much in the last twenty or thirty years, education, science education, education "delivery," and students have changed significantly. Industry requirements and social pressures have also changed, as has the nature of physics research at universities. The very definition of what ought to be required in a major might be a moving target. The one important change in undergraduate physics education since many faculty were in college is the increasingly critical role of undergraduate research. Current employment prospects for graduates require more and more education and more research skills. Research experience also gives students enthusiasm for physics. The talk gave an overview of the current undergraduate research programs at Cal State Dominguez Hills, the current curriculum, and included a discussion of some ideas many physics departments are trying as they move into the future of undergraduate physics education.

KC Cole < kccole@usc.edu > from the Annenberg School for Communication at USC gave the afternoon invited talk "A Physics Love Story." KC spoke about Frank Oppenheimer and his creation of the Exploratorium. Much of her talk was based on material in her latest book "Something Incredibly Wonderful Happens: Frank Oppenheimer and the World That He Made Up." She described how when she first met Frank in 1972, she knew nothing (and cared less) about science but that thanks to his knack for making physics (especially) irresistible, she (like thousands of others) became hopelessly addicted. The trick was finding out that science had nothing to do with tests and right answers— and everything to do with intuition, aesthetics, play, noticing, honesty, guesswork, aimless wandering, idle curiosity, and yes, saving the world. Frank Oppenheimer was schooled in art, science and "ethical culture" but found himself a pacifist building an atomic bomb, a physicist exiled from science because of his outspoken efforts to stop the madness, raising cattle and teaching high school in the Colorado mountains. Frank Oppenheimer used what he'd learned from art and science and teaching and ranching to make up his own world--a "museum of human awareness"—which was soon copied all over the world.

During the business meeting, the proposed SCAAPT by-laws were described, debated, and passed. Attendees were reminded that SCAAPT is funding "Local Area Networks" (LANs) and were asked to submit applications. The first \$100 award was made to Bob Rumer from Cal Lutheran to support collaboration with high school teachers in the Thousand Oaks area. A new SCAAPT initiative – a student video contest – was announced. The members viewed a slide presentation on the Ontario Winter Meeting featuring highlights of the meeting. All were encouraged to attend

The ever-popular Show 'n' Tell featured demonstrations by:
Peanut McCoy, "Technicolor algebra"

Ertan Salik, "Very interactive books on the iPad, will this be the future of the textbooks?"
Rae Anderson, "Desktop Whiteboards to Read Students' Minds"
Mark Helmlinger, "Multiple demonstrations involving light and greenhouse gases"
James Lincoln, "PhysicsVideos.net" Beats and Mozart
Bill Layton "Exploring your Universe"
Lee Loveridge "Spin ½ with Arm"
Gary Reynolds "Grad List"
Frank Lee "High Speed Photography"

The following contributed talks were presented:

"Computer Supported Collaborative Physics" Norman Herr, California State University, Northridge

"Remedying the Typical Text's Discussions of Faraday's Law and the Maxwell-Ampere's Law" Eric Hill University of Redlands

"10 Things You Should do with a Tuning Fork" James Lincoln Tarbut V' Torah HS

"Enhancing Astronomy Lectures with the iPad" Richard Reins Los Angeles Mission College

"Media sharing websites and physics education" Edward Price CSU San Marcos

"Applying Technology in Large Lecture Physical Science Classes" George Kuck CSU Long Beach

"Combing large and challenging teaching assignments with research and discoveries at the frontier of physics for the improvement of (undergraduate, graduate and high school) education as well as research in physics" Kenneth Ganezer CSU Dominguez Hills

The meeting ended with our World Famous "Order of Magnitude Contest." This meeting's question was: "*What is the probability that a human being would be hit if a satellite breaks up into 30 reentry-surviving pieces?*" The median answer was 2×10^{-10} . Steve Paik won a \$100 gift certificate donated by Vernier. James Lincoln won a book on astronomy peer instruction and Conrad Hirano, and Paul DeVoe, and G. Bevli won water bottles donated by AAPT.

We thank our corporate sponsors – Vernier Software and Technology <http://www.vernier.com> and the American Association of Physics Teachers <http://www.aapt.org/>– for their support and donation of door prizes.

The Southern California Section will hold its Spring Meeting April 21 at CSU San Marcos. Please bookmark the SCAAPT URL <http://www.scaapt.org/> and check for more information in early spring.

Mary Mogge, Section Representative
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