

CO/WY AAPT and SPS Zone 14 Meeting Hosted by the Colorado School of Mines April 17-18, 2009

The Colorado School of Mines Chapter of SPS hosted a meeting of Zone 14 in conjunction with the Colorado-Wyoming American Association of Physics Teachers section meeting, on the Colorado School of Mines campus in Golden, Colorado.

The meeting kicked off on Friday April 17 with a tour of the Furniture Row NASCAR garage, followed by a BBQ. After a warm welcome by CSM SPS Chapter Advisor Chuck Stone, keynote speaker Diandra Leslie-Pelecky from the University of Texas at Dallas entertained the SPS Zone 14 and CO/WY AAPT crew with a presentation on the physics of NASCAR. An ice cream social and SPS bowling night at Golden Bowl followed the talk.



On the morning of Saturday April 18, Sam Sampere from Syracuse University wowed the crowd with a few of the PIRA 200 demonstrations. He emphasized the importance of demos in physics education and outreach, and left some of the teachers in the crowd with take-home goodies. Before lunch, attendees chose from a jam-packed schedule of paper presentations ranging from snowboarding to racing to organic solar cells.

Lunch and the AAPT business meeting were held in CSM's own Slate Cafe. After lunch, Brian Jones from CSU's Little Shop of Physics and Diandra Leslie-Pelecky both held hands-on workshops. The DynamicBook Solution presentation followed for AAPT while SPS held its business meeting. Next, William M. Fairbank, Jr., Chair of the Four Corners Section of the American Physical Society awarded cash prizes to paper presenters in the categories of "Best Overall," "Most Unique/Creative," and "Best Pedagogical" student papers. Finally, a game of Physics Jeopardy rounded out the afternoon.



Thursday April 16 and Friday April 17 saw moderately heavy snow in the Denver metro area as well as extremely heavy snow in northern Colorado, southern Wyoming, and especially the Colorado Rockies and their foothills. For this reason, many attendees, including the Zone Councilor and Associate Zone Councilor, were unable to make it to Golden on Friday and Saturday. Nevertheless, the meeting drew over 70 attendees from around the state, and was kept lively with its 32 CSM SPS volunteers. Only one SPS member from a different chapter attended, and in the future more effective advertising as well as holding meetings in the fall when students are less busy may yield better SPS attendance.

The Colorado School of Mines chapter of the Society of Physics Students wishes to thank the following individuals for their contributions to our Zone Meeting:

- Diandra Leslie-Pelecky
- Sam Sampere
- Brian Jones and the Little Shop of Physics crew
- John Parks from the NASCAR garage
- Pat Kohl, Vince Kuo, Jim McNeil, and Todd Ruskell from CSM for moderating paper presentations
- Mark Santee, W.H. Freeman & Co.

Thanks to those who submitted papers:

Walter Unglaub (student), Colorado School of Mines

“Time-Dependent Modeling of Fast Wave Absorption with Multiple Damping Mechanisms”

Clint Shelley (student), Mesa State College

“The Dynamics of a Bubble Rising through a Fluid”

Chris Newby (student), Colorado School of Mines

“Modeling Feshbach Resonance in Rb-85”

John T. Parish IV (student), Homeschool

“Estimation and Tracking: Where it Wasn't”

Connie Willis (writer)

“Don't You Guys Just Make That Stuff Up?”

Caleb Kruse (student)

“Researching Calcification, and the Effects of Ocean Acidification on *Nannochloropsis oculata*, *Chaetomorpha spiralis*, *Halimeda monile*, and *Udotea flabellum*”

Morgan James Robler (student) and Timothy Eller (student), Colorado School of Mines

“GPS Timing for the Pierre Auger Observatory”

Ron Deiotte (graduate student), Colorado School of Mines

“An Introduction to Quantum Information Processing”

Mark Coffey, Colorado School of Mines

“Solving the Maxwell Equations on a Quantum Computer”

Matt Bowles and Jonathan Powers (students), Colorado School of Mines

“Design and Implementation of a Muon Lifetime Experiment” (Best Pedagogical Paper)

Xerxes Steirer (graduate student), Colorado School of Mines

“Ultrasonic Spray Processing and Interface Investigations for Organic Solar Cells”

Christine Morrow, University of Colorado

“A NanoLeap into New Science”

Thomas E. Furtak, Colorado School of Mines

“Adapting Peer-Tutoring to an Online Format”

Courtney Willis, University of Northern Colorado

“Toying Around With the Wii Smoothboard”

Jacob Cady (student), Mesa State College

“Birds on a Wire”

Anne Andrew (student), University of Colorado Denver

“Means to Scientifically Inform the General Public”

Tolga Gok and Frank Kowalski, Colorado School of Mines

“Real-Time Assessment of Problem-Solving Strategies of Physics Students using Tablet PC's & InkSurvey”

Frank Mathews and Jack Kintner, Colorado School of Mines

“Physics for Female Students in Tanzania, East Africa

J.D. Birchmeier, Divine Child High School

“A Dozen Uses for Your Dead Christmas Tree Lights”

John Smith (student), Colorado School of Mines

“Testing of a Theoretical Model for a Terrain Park”

Travis Michelle Nokes (student), Colorado School of Mines

“Injury Risk upon Impact for Terrain Park Snowboard Jumping” (Most Creative/Unique Paper)

Jonathan Kintner (student), Colorado School of Mines

“Amateur High-Powered Rocketry”

Bruce Pearson, Jefferson High School

“Connecting the Classroom to the Race Track”

Jamie Bubak (student), Ralston Valley High School

“Understanding Physics in Motorsports”

And special thanks to:

- Tom Furtak, CSM Physics Department Head
- Barbara Pratt-Johnson, CSM Physics Department Secretary
- Summer Jackson, CSM Physics Department
- J.D. Birchmeier, President, CO/WY Section AAPT
- Brian Huang, Vice President, CO/WY Section AAPT
- Chuck Stone, Vice President, CO/WY Section AAPT
- Richard J. Krantz, Secretary/Treasurer, CO/WY Section AAPT
- Don Cameron, Section Representative, CO/WY Section AAPT
- William M. Fairbank, Jr., Chair of the Four Corners Section of the American Physical Society
- Rudi Michalak, Zone Councilor, SPS Zone 14
- Sherry Orton, Associate Zone Councilor, SPS Zone 14
- Tim Lim, President, CSM SPS
- Jason Buster, Vice President, CSM SPS
- Andrea Yocom, Secretary, CSM SPS
- Ginger Gilfillan, Treasurer, CSM SPS
- Charles Pearl, Member-at-Large, CSM SPS

