

- 8:00 - 8:45 Board Meeting
8:45 - 9:10 Registration, coffee, informal conversations
9:10 Welcome - Lenore Horner, President SOS AAPT
9:15 - 9:20 Physics on steroids -- how to give your physics program a shot in the arm.
Aaron Titus

I like to define undergraduate research as asking interesting questions and finding answers to those questions. Video analysis is one of the most economical and flexible experimental techniques to enable students to do undergraduate research, starting with introductory physics. Particular features of Tracker--a free cross-platform, open-source video analysis application--allow students to easily change reference frames, compensate for panning and zooming of a camera, auto-track objects, and test a numerical model. Computational modeling, using tools such as Easy Java Simulations and VPython, allow introductory students to solve problems numerically so that they can compare predictions from theoretical models to experimental results. Student projects will be demonstrated, with an emphasis on the benefit of undergraduate research in the freshman and sophomore years. If you want to hook students on the excitement of independent discovery with a budget of \$300 or less (for a camera), then video analysis and computational modeling are for you.

- 10:20 - 11:00 QuarkNet Mike Sokoloff - UC
11:00 - 11:15 **Break**
11:15 - 12:00 **Morning Contributed Talks Session**
11:15 - 11:30 Effectiveness of Inquiry Based Instruction in a Low Socioeconomic District - Christine Farley, Jessie Miller, Andrew Ruth, and Kelly Williams
11:30 - 11:45 Implementing Peer-review of Writing for Freshman Engineers – Kathy Harper - OSU
11:45 - 12:00 Learning VPython / Glowscript – Lenore Horner
12:00 - 1:00 **Lunch**
1:00 - 1:30 Science Fair and Student Engagement at all levels - Sandra Doty – Ohio U. Lancaster
1:30 - 3:00 **Afternoon Contributed Talks Session**
1:30 - 1:45 Fun with water fountains – Sandra Doty
1:45 - 1:50 The errors of my ways – Kevin McChesney – Pickering High School Central
1:55 - 2:10 From Clickers to Web Clickers: The new generation classroom response system - Lei Bao - OSU
2:10 - 2:15 Flip my class with a free web clicker system. – Lei Bao - OSU
2:15 - 2:30 Physics And ART – Burt Stumpf – Ohio U.
2:45 - 3:00
2:45 - 3:00
3:00- 3:30 business meeting

Safe travel home!