Addendum to Onsite Guide

2015 AAPT Winter Meeting – San Diego, January 3–6

Room Change:

–Special Workshop for Section Representatives
9 a.m.–14 p.m.
Sunday, January 4
moved to **Executive 2B**

–Bringing the New Physics Teachers Workshop (NPTW) to San Diego High School Teachers

10 a.m.–12 p.m.
Sunday, January 4
moved to **Grande Ballroom B**

Time Correction Monday:

Due to a typo on page 60, the time for the Awards Session on Monday, Jan. 5, should be 9:30–11 a.m.

Abstracts added:

The following abstracts have been added:

IB04: 4-4:10 p.m. (Tuesday) A Proposed Study of the Influence of the Language of Administration upon Measures of Student Learning of the Concepts of Mechanics

Contributed – Thomas Olsen & Mohamed Kariapperm Alfaisal University, Riyadh, Kingdom of Saudi Arabia

The Force Concept Inventory (FCI) has become a world standard as an instrument to measure student progress in learning the concepts of Newtonian Mechanics. In particular, the Normalized Gain has proven to be a robust measure of the effect of pedagogy upon student learning. While the original FCI was developed in English, translations have been made. This study proposes to examine the effect, if any, of administering the FCI in different languages to different groups of students, taken from the same student population. As an English language university in Riyadh, Saudi Arabia, Alfaisal University is an excellent laboratory for such a study. The investigators propose to administer the FCI to all introductory physics students at Alfaisal, at the beginning and the end of the first course in mechanics. Half the students will be randomly assigned to an English administration and half to an Arabic administration. The results will be subjected to statistical study to learn what impact the language of administration has on pre-instruction, post-instruction, and normalized gain scores.

Abstract changes:

HG04: Year Long Physics Investigations with Student e-portfolios

has been moved to **CD07: 5:40 to 5:50 p.m. Sunday, Jan. 4.**

FA06: 7:30-7:40 p.m. Is Angular Displacement a Vector Quantity?

Contributed – William A. Dittrich, Portland Community College, PO Box 19000, Portland, OR 972280; tdittric@pcc.edu

Robert Drosd and Leonid Minkin, Portland Community College

Alexander S. Shapovalov, Saratov State University (Russia)

A fundamental error in the foundation of rotational kinematics and dynamics is described. All current textbooks treat angular displacement as a scalar quantity, yet the time derivative of angular displacement is suddenly a vector quantity. This fundamental violation of the mathematical laws of vector calculus is corrected by adoption of a new vector definition of angular displacement, from which all equations of rotational kinematics and dynamics can be derived while improving the symmetry between equation sets of both linear and rotational kinematics and dynamics. This preserves the vector nature of all subsequent angular quantities including angular momentum.

PST3A01: 3:30-4:15 p.m. Is Angular Displacement a Vector Quantity?

Poster – William A. Dittrich, Portland Community College, SY ST 312 PO Box 19000, Portland, OR 97219; tdittric@pcc.edu

Robert Drosd and Leonid Minkin, Portland Community College

Alexander S. Shapovalov, Saratov State University (Russia)

A fundamental aspect of rotational motion has been found to be false. This casts the entire subjects of rotational kinematics and dynamics into doubt unless the mistake is corrected. The vector nature of angular velocity, acceleration, torque, and angular momentum are then in jeopardy of becoming scalars, which would have disastrous effects on the entire structure of physics. A new vector definition of angular displacement is introduced, preserving the vector nature of all quantities mentioned above. From this new definition, all subsequent rotational kinematic and dynamic equations can be derived, and it improves and completes the symmetry between rotational and linear equations. This new definition of angular displacement is the subject of a submitted paper to *The Physics Teacher,* and will be described and discussed at this poster session.

New Exhibitors:

- **GradSchoolShopper.com (GSS) – Booth 311**

GSS features the profiles of several hundred graduate programs with comparative information on degrees offered, admissions, financial aid, housing, degree requirements, department and faculty research specialties, facilities, notable alumni, etc. The Graduate Programs in Physics, Astronomy, and Related Fields is its print companion. The book is celebrating its 50th Anniversary this year.
email: ymatthews@aip.org, *Website:* http://GradSchoolShopper.com
Phone: 301-209-3023

- **It's About Time**

It's About Time partners with educators to move STEM education forward with student focused, project based/problem based programs - with the engineering process embedded throughout. IAT is the leading publisher of NSF funded middle and high school science and math STEM programs.
Address: 333 North Bedford Road, Suite #110, Mount Kisco, NY 10549.
Phone: 914-273-2233, *email:* support@iat.com

New Commercial Workshops:

- **CW07: Pearson - Conceptual Workshop**

Date: Monday, January 5
Time: 12:30–1:30 p.m.
Room: Executive 4

Organizer: Paul Hewitt

Paul Hewitt, author and educator, will discuss the benefits of a conceptual approach in introducing physics to a diverse audience of non-scientists. He will also present new digital media that help students get the most learning from the conceptual approach. His new screen-cast mini-lectures will be demonstrated.

- **CW06: Jablotron: The Amazing World of Ionizing Particles – Experiments with MX-10 Particle Camera**

  Date: Sunday, January 4
  Time: 1–2 p.m.
  Room: Marina 6

  Leader: Peter Zilavy (Peter Žilavý)

  If you wonder how to easily show your students hidden but exciting world of energetic particles coming from natural and artificial sources, we might have a solution. With the MX-10 Particle Camera you can demonstrate phenomena in a way which is impossible with traditional school detectors and devices (such as GM tubes or cloud chambers). The MX-10 is a unique educational device capable of detecting and displaying ionizing radiation, visualizing and analyzing particle tracks real-time. Powered by the Timepix chip created in CERN within the Medipix collaboration and using the Pixelman control software (by the Institute of Experimental and Applied Physics of the Czech Technical University in Prague), the MX-10 is a useful tool for bringing live particle physics right into your school or university lab.

  At this workshop you will have the opportunity to try out the device and carry out several experiments that illustrate selected properties of ionizing radiation.

New Presiders:

Session BD: Adrienne Traxler

Session DH: Gina Quan

Session: FD: David Hembroff

Session GB: Sytil Murphy

New phone number at registration desk:

240-247-7937.