Fall 2014 Joint Meeting of the Illinois and Iowa Sections of the AAPT
October 24-25, 2014
Bettendorf High School
Bettendorf, Iowa

The fall meeting is organized around the theme “Particles and Waves”. Invited presentations are:

"Neutrino Physics Using Liquid Argon Time Projection Chambers" – Dr. Jason St. John, of the LHC Physics Center, Fermilab – Friday afternoon

“The Van Allen Radiation Belt Storm Probes” – Dr. Craig Kletzing, Dept. of Physics, Univ. of Iowa – Friday banquet speaker

“Teaching the Physics of Music on Four Continents” – Dr. Thomas Rossing, Center for Computer Research in Music and Acoustics, Stanford University, and Prof. Emeritus of Physics, Northern Illinois University – Saturday morning

Friday Workshops

W1. 9:30-12:00 – Why the Millikan Award? A Study of the Life and Influence of Robert A. Millikan, Bonnie Mitchell and Richard Rockrohr, Jackson County Historical Museum

W2. 10:00-12:00 – Data Visualization using Plotly, Dan Pfeifer and Chris Parmer, Plotly, Inc.

W3. 10:00-12:00 – Using Arduinos in Physics Classes, Andrew Morrison, Joliet Junior College

W4. 12:30-3:00 – The Life and Influence of Robert A. Millikan - Repeat of workshop W1, Bonnie Mitchell and Richard Rockrohr, Jackson County Historical Museum

W5. 1:00-3:00 – Advanced Plotly Tutorial and Plotly's Multiple Language Coding, Dan Pfeifer and Chris Parmer, Plotly, Inc.

Friday evening parallel family activities that have some physics content are scheduled at 8:00 pm:
– Physics demonstrations by Dale Stille of the University of Iowa
– Short shows in the Don Schaefer Planetarium (at Bettendorf High School)
– Telescope viewing sponsored by the Quad Cities Astronomical Society on the football field

Meeting attendees are invited to present 15 minute Contributed Presentations, which will be scheduled on Friday afternoon and Saturday morning. There are five categories of presentations: (a) Active Learning, (b) Teaching Methods, (c) Demonstrations, (d) Research, and (e) Other. Please check the appropriate box on the submission form. The title should be submitted by Friday, Oct. 10, and the deadline for all of the information, including a one paragraph description, is Friday, Oct. 17. Use the online form on two occasions, if needed, to first submit the title, then later to submit the description (abstract).
Take Fives: Anyone who registers for the meeting may take 5 minutes or less to share a favorite item related to teaching physics - a demonstration, a new Web site, announcement of an upcoming event, etc. Please use the Registration form to tell us the title of your Take Five. There may be time for a few unannounced Take Fives at the end of the last session of the day.

We encourage you to bring that odd item from your physics stockroom which nobody can identify, so that others at the meeting can explain what it was used for, by filling in a form placed by your item, which will be placed on a table with other mysterious items from the past. Indicate if you are bringing a "What is it?" on your registration form.

Saturday lunch is pizza and a beverage. The cost is included in the registration fee. The Iowa and Illinois sections will have their business meetings during lunch.

On Saturday afternoon from 12:45 to about 3:00 pm there will be an Ed. Camp with the topics to be discussed determined by having attendees key in their physics and STEM interests via a computer, tablet or smartphone. After watching the words evolve on large screens, leaders will announce where particular topics will be discussed. Sessions may be long or short with people coming and going. This event is designed to be very interactive, informative, and customized for those who attend. This will be organized by Bettendorf High School physics teacher Christopher Like.

Please join us, to learn more about physics, discover new tools and techniques for teaching, and share your experiences via your contributed presentations and Take Fives. You are welcome to come at the last minute, because on-site registration will be available, but for banquet and lunch reservations, you must register online by Friday, Oct. 17. Registration after this date will also cost more.

For more information, maps and directions, registration forms, hotel information, and the program, see our website: www.isaapt.org

Future ISAAAPT Meetings
• Spring 2015 – April 10-11 – Principia College, Elsah, IL (Host: Jonathan Langton)
• Fall 2015 – Millikin University, Decatur, IL
• Spring 2016 – University of Illinois at Urbana-Champaign

If you are considering being a host for a future meeting, please contact us.

Future Chicago section meeting
• Fall 2014 – Nov. 8 – Lewis University
• See: https://sites.google.com/site/chicagoaapt/

Future national AAPT meetings
• Winter 2015 – Jan. 3-6 – San Diego, CA
• Summer 2015 – July 25-29 – Univ. of Maryland, College Park, MD
• Winter 2016 – Jan. 9-12 – New Orleans, LA
• Summer 2016 – July 16-20 – Sacramento, CA
• http://www.aapt.org/Conferences/meetings.cfm

APS Prairie section meetings
• Fall 2013 – Nov. 21-22 – Monmouth College, Monmouth, IL
• See: http://www.aps.org/units/psaps/index.cfm

AAPT NEWS eNNOUNCER
http://www.aapt.org/aboutaapt/ennouncer/index.cfm

The Physics Front!
The Physics Front provides high quality resources for the teaching of physics and physical sciences courses, and is a free service provided by the AAPT in partnership with the NSF/NSDL. Find it at http://www.thephysicsfront.org/

ISAAPT listserv
This listserv is for ISAAPT members and interested physics teachers. For a description, see: http://helios.augustana.edu/isaapt/listserv-isaapt.html
One of ISAAPT’s Own Honored

One of ISAAPT’s own, Rebecca E. Vieyra of Cary-Grove High School in Cary, IL, has been recognized as an Albert Einstein Distinguished Educator. She is spending the 2014-2015 school year as an Einstein Fellow placed at the National Aeronautics and Space Administration Aeronautics Research Mission Directorate in Washington, DC. She has seven years of high school teaching experience in the areas of physics, physical science, and Project Lead the Way Principles of Engineering. Rebecca graduated from Illinois State University in 2007 with a B.S. in Physics Education, and in 2010 from the Illinois Institute of Technology with a M.A.S. in Science Education. She was honored as a finalist of the nation’s highest teaching award, the Presidential Award for Excellence in Math and Science Teaching, for the state of Illinois in 2013. (The final award announcement is still pending.) She earned National Board Certification in AYA/Science-Physics in 2011.

Vieyra’s professional interests include the use of mobile device technology to enhance learning through inquiry and gaming, and the application of physics education research. She actively strives for excellence in classroom teaching, all the while serving as a leader in the physics teaching and physics teacher education communities. She, along with her physics teacher educator father, Carl Wenning, recently completed a 40-chapter textbook titled Teaching High School Physics. She was recently appointed co-coordinator of AAPT’s eMentor program and was recently featured in a video (http://vimeo.com/102793519) by Google Play for Education. Rebecca spent part of June in Indonesia lecturing and holding workshops dealing with the nature of science.

Revised Meeting Planning Guide

Following a recommendation from the ISAAPT Council at the summer retreat, Carl Wenning has revised the online planning guide for meetings. He reorganized the topics, added to some, and removed highlights making the document more readable. Future hosts should find the guide more helpful. See http://helios.augustana.edu/isaapt/planguide.html

Call for Nominations for Outstanding High School Physics Teacher Award

Each school year the Illinois Section of AAPT is pleased to receive nominations for our award for outstanding high school physics teachers in the state. Fellow teachers and school administrators who are aware of exceptional performance and enthusiastic student response are encouraged to fill out the online nomination form found on the ISAAPT website. The person who is nominated will be notified and asked to fill out the online candidate information form. The deadline for receiving nominations is December 31, 2014. The teacher who is selected will be notified and presented with the award at the fall 2015 meeting of the Section.

Please note that this is a change from the previous timetable. Because we get more attendance of high school teachers at the fall meeting, a recent council meeting approved a change so that the award will be granted in the fall. Also note that we will maintain previous nominations for a period of time for consideration in future years. Don Reid has volunteered to chair the committee.
Newsletter going electronic

The Illinois Physics Teacher will enter the internet age with the next issue. So many other organization newsletters have gone electronic, yet this newsletter has been sent out by snail mail well into the internet age. This current issue marks 26 years of all-volunteer production of paper copies. The ISAAPT council considered this issue at the summer retreat and voted to make this the last paper copy of the newsletter. This will reduce the burden of printing and mailing over 100 copies, and free up time to explore other formats. More frequent updates may result. The editor, Brian Davies, encourages input about other ways to inform the membership of our meetings, discussions, and initiatives.

New initiatives from the summer retreat

The minutes of our council meetings and summer retreats have often been included in this newsletter, but since these are posted on the ISAAPT website, it makes sense to simply summarize the major issues that were addressed in recent meetings.

On July 9 the council members gathered at Illinois State University to consider the important issues facing our Illinois section.

Strengths of the section include our meetings, programs for cross over teachers (only in two of the LPSA zones at present), and a strong commitment to teaching physics. Another strength is that we provide a means for networking, but this can obviously be improved. Some of our weaknesses include a need to provide more development opportunities for cross over teachers, a need to activate some quiescent LPSA zones, an aging membership, and a low turnout of high school teachers at meetings and workshops. Our online resources for teachers could be improved.

Online registration for our meetings will be improved by providing maps and better information about parking and hotels. There will be on-site paper evaluations followed up by email surveys to ensure feedback about the meeting, to help improve future meetings. Program information will be displayed more prominently. Late registration will be discouraged by an increased fee. For meeting hosts, the planning guide has been updated (see the article on the previous page for the link to this guide). For the teachers attending the meeting, there are new forms for the CPDU's that we have been providing, and the ISAAPT will reapply to be a provider under the new state rules.

The High School Physics Teacher Recruitment, Preparation, and Retention Committee has not been active lately. They seek new members to work on this issue and increase the professional development activities for teacher at our meeting workshops and in LPSA gatherings.

The council voted to support workshops at the fall and spring meetings with up to a $500 grant. These grants can also be used to hold LPSA workshops.

Finally, Andrew Morrison announced that we are seeking candidates for new council representatives (for all categories: 4-year college, 2 year college, and 2 high school reps), a president-elect, and a section rep. These will be voted on at the business meeting on Sat. Oct. 25 during lunch.