Spring 2010 Meeting
Illinois Section of the AAPT
March 26-27, 2010
Blackburn College, Carlinville, IL

The spring meeting chair, Don Reid, has organized the meeting around the theme “Green Physics”. Invited speakers and their presentations are:

"What is Wrong with the Science of Global Warming", David Marx, Physics Dept., Illinois State University - Friday evening banquet speaker

"Astrobiology", Tom Foster, Southern Illinois University Edwardsville - Friday at 3:00 pm

"Green Roof Systems", Bill Retzlaff, Environmental Science Program, Southern Illinois University Edwardsville - Friday at 4:00 pm

"Zoological Engineering - Form, Function, and Physics", Ed Zalisko, Biology Department, Blackburn College - Saturday at 8:30

"Physics Olympics", Richard Gelderman, Western Kentucky University - Saturday at 11:00

Five workshops are planned; sign up for these on the registration form.

W1. Friday 10:00-12:00 "Green Physics with Problem-Based Learning" - Carl Wenning

W2. Friday 10:00-11:00 "Experiments with Vernier Equipment" - Tom Foster

W3. Friday 11:00-12:00 "Breaking the Rules: Oobleck and Other Slimy Stuff" - Mark Armstrong

W4. Saturday 9:45-10:30 "Global Warming" - Panel Discussion (Volunteers for the Panel may contact Don Reid or sign up on the Registration form.)

W5. Saturday 1:00 - 2:00 "Local Physics Alliance Zone Leader Meeting" - Ken Wester and Carl Wenning

Meeting attendees are invited to present 15 minute Contributed Presentations, which will be scheduled on Friday afternoon and Saturday morning. There are six categories of presentations: (a) Active Learning, (b) Teaching Methods, (c) Demonstrations, (d) Research, (e) Student Research Symposium and (f) Other. Please check the appropriate box on the submission form.

Students are invited to present a talk at the Student Research Symposium, and there will be awards for best student papers. See the ISAAAPT web site for details and rules.

The length of presentations is 15 minutes, including time for questions. The title should be submitted by Friday, Mar. 12. The deadline for all of the information, including a one paragraph description, is Friday, Mar. 19. Use the online form on two occasions, if necessary, to first submit the title, then later to submit the description (or abstract).
Call for judges: We need physics instructors to serve as judges for the Student Research Symposium. Please indicate on your registration form if you are willing to assist.

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.

ISAAPT has been recognized by the Illinois State Board of Education (ISBE) as an official provider of Continuing Professional Development Units (CPDU’s). The ISAAPT’s application was renewed on 10/19/2009 and is approved through 12/30/2011. The Coordinator for this program, Carl Wenning, will be available to provide this service to teachers.

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 March 19. In addition to the banquet speaker, the banquet will feature the presentation of the 2009-2010 Outstanding High School Physics Teacher Award. For more information, maps and directions, registration forms, hotel information, and the program, see our website: www.isaapt.org

Future ISAAAPT Meetings

- Fall 2010 – Sherrard High School, Sherrard, IL
- Spring 2011 – Eastern Illinois University, Charleston, IL
- Fall 2011 – Joliet Junior College, Joliet, IL

If you are considering being a host for a future meeting, please contact Dave Sykes at dave.sykes@llcc.edu

Future Chicago section meetings

- Spring 2010 – April 24 – Chicago State Univ. (Hosted by Mel Sabella and featuring talks by well-known physics educators, Eric Mazur of Harvard University and Nadya Mason of the Univ. of Illinois at Urbana-Champaign)
- Fall 2010 – Joliet West High School (tentative)

Future national AAPT meetings

- Summer 2010 – July 17-21 – Portland State University, Portland, Oregon
- Winter 2011 – Jan. 8-12 – Jacksonville, Florida
- Summer 2011 – July 30 - Aug. 3 – Omaha, Nebraska
- Winter 2012 – Feb. 4-8 – Ontario, California
- http://www.aapt.org/conferences/meetings.cfm

APS Prairie section meetings

- Fall 2010 – tentatively planned for November
- See: http://www.aps.org/units/psaps/index.cfm

The Physics Teacher, the ISAAPT Newsletter

Illinois Section of the American Association of Physics Teachers

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Local Physics Alliances for the Illinois Section

by Carl J. Wenning, ISAAPT President

Local physics alliances (LPAs) serve as informal professional societies operating within a small geographic area. The membership of LPAs meets frequently to forge and sustain links between high school, community college, and university faculty members. Attendees share ideas, gain a sense of empowerment, conduct community outreach, and have a good time. Physics teachers can increase their effectiveness by forming local alliances, but especially when they spend time promoting and developing vertical relationships with other teachers.

Today more than 100 LPAs exist within the USA. Several LPAs exist in the Chicago Section of the AAPT – Illinois State Physics Project, Physics Northwest, Physics West, and Quarknet to name but a few. A number of downstate Illinois physics teachers are active in an LPA based in the St. Louis area. LPAs once existed in the Peoria and Springfield areas, but these have become inactive over the years. It is time to resurrect and create new LPAs within the ISAAPT region to help achieve the ends for which this organization was developed in 1941.

At last autumn’s ISAAPT Executive Council meeting in East Peoria, the Executive Council agreed to the development of a dozen LPA zones within the geographic area of the Illinois Section. Leaders have now been arranged for ten of the twelve zones. Leaders are needed in Joliet and Carbondale, and nearly all zones can use additional co-leaders. Leaders have been asked to give about one year of their time, now through the end of next school year. The work during this first year will be to bring the LPA together and host the first meetings – two during the autumn and two during the spring.

Many of our current zone leaders have been working recently on developing email databases that will be used to directly disseminate information (not using a listserv) about LPA meetings, ISAAPT offerings, and Section meetings. Recently, zone leaders have gathered over 250 email addresses of in-service high school physics teachers. These were used to promote the ISAAPT New/Crossover Physics Teacher Workshop held at Lincoln Land Community College on February 27th. Many of the teachers contacted wrote back to indicate how pleased they were to hear about this offering, and asked to receive more information about similar activities in the future. This bodes well of the development of our LPAs.

Following the conclusion of the Spring Section meeting at Blackburn College in Carlinville, there will be an informational meeting for new and prospective zone leaders. The meeting will be held immediately after lunch, from approximately 1 until 2 p.m. Zone leaders and interested others are invited – indeed encouraged – to attend this meeting. Ken Wester from Illinois State University (ISU) and I will speak about LPA experiences and the numerous resources available for zone leaders. It is hoped that the president of the Illinois Science Teachers Association, Gwen Pollock, also will be present at that meeting to talk further about long-range possibilities for “vertical relationships” with middle and elementary school science teachers. Such relationships will help those involved to become better science teachers.

With possible external funding on the order of $4,000, Ken and I hope to be able to host an all-day zone leaders workshop at ISU later this summer. This workshop will model a successful zone meeting, and will provide lots of ideas and resources.

If you would like to be part of these efforts, please contact me by writing wenning@phy.ilstu.edu. I look forward to hearing from you and to seeing you at our spring zone leaders informational meeting and our summer zone leaders workshop.
Brian Davies Receives Distinguished Service Citation

Prior to the spring Section Meeting, the Executive Council solicits nominations for the Distinguished Service Citation. This award is conferred by the ISAAPT during the fall meeting if a suitable candidate is identified. The recipient of the 2009 DSC was Brian Davies, Asst. Prof. of Physics at Western Illinois University. The award was conferred in recognition of the outstanding contributions Dr. Davies has made to the field of physics teaching in the state of Illinois and service to the Illinois section of AAPT. Through the award special recognition is given in the areas of leadership of colleagues and students through physics teaching, professional contributions to section activities through contributed papers, workshop presentation, committee service, or elective office and distinguished service at the home institution.

Call for Nominations for Outstanding High School Physics Teacher Award

Each school year the Illinois Section of AAPT is pleased to receive nominations 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. Please note that the deadline for receiving nominations is December 1, 2010. The teacher who is selected will be notified and presented with the award at the spring 2011 meeting of the Section.

JPTEO Autumn 2009 Issue Available

The latest issue of the Journal of Physics Teacher Education Online has just been released. Articles included in this issue are:
• “The New Aristotelianism?”, Editorial
• “Scientific epistemology: How scientists know what they know by Carl J. Wenning”
• “Connecting three pivotal concepts in K-12 science state standards and maps of conceptual growth to research in physics education” by Chandralekha Singh & Christian D. Schunn
• “Teaching of heat and temperature by hypothetical inquiry approach: A sample of inquiry teaching” by Manzoor Ali

This issue of JPTEO can be viewed and/or downloaded by visiting the Journal’s website at http://www.phy.ilstu.edu/jpteo/.

Summer Opportunity for Physics Teachers

Northwestern University is offering a summer Research Experience for Teachers. This program is for physics teachers who might be interested in working with scientists this coming summer. This program carries an $8,500 stipend and is offered by the Northwestern University Materials Research Center. Science teachers are invited to participate in 8 weeks of laboratory research in the group of one of Northwestern’s leading research professors. Research topics include a wide range of materials science, physics and chemistry areas such as polymers, nanoscience, biomaterials, molecular electronics and photonics. The program runs from June 21 through August 13, 2010. At the end of the 8 weeks, the participants not only write a technical paper based on their research, but also develop a curriculum project that they can use in their classrooms. K-12 teachers and community college professors who have a bachelor’s degree in science or engineering are eligible; no prior research experience is necessary. Participants are eligible to receive graduate credits through the National Louis University. The application deadline is March 15, 2010. For more information, or to apply, please visit the program’s website: http://www.mrsec.northwestern.edu/content/educational_programs/ret.htm
If you have any questions about the RET program, please feel free to contact Martha J. Tanner, project director, via email or phone at mrc@northwestern.edu or 847-491-3606.
ISAAPT Guidebook Program

By action of the Executive Council on October 17, 2009, the ISAAPT Guidebook Program was renewed for three more years. The program provides resource guides to qualifying teacher candidates at the request of an Illinois PTE program administrator. Details about the program can be found at the following URL: http://helios.augustana.edu/isaapt/guidebook.html.

Free Publication Available from AAPT

Download your copy of The Role, Education, Qualifications, and Professional Development of Secondary School Physics Teachers from the following website: http://www.comPADRE.org/. This publication, written by Beverly Cannon (TX), Patrick Callahan (NJ), Elizabeth Chesick (PA), Joan Mackin (PA), Shannon Mandel (IL), and Carl Wenning (IL), is a useful guide or high school physics teachers, and those responsible for hiring and supervising them. Candidates for secondary school physics teaching positions may be drawn from a variety of sources. Some may have completed an accredited physics or physics teaching program, others may have training in other educational, science, engineering, or business disciplines. Still others may be entering the profession as an alternative or second career. The purpose of this document is to provide some guidance for administrators to gauge a candidate's qualifications to teach physics. See: http://www.compadre.org/PTEC/items/detail.cfm?id=9447

AAPT NEWS eNNOUNCER

The AAPT NEWS eNNOUNCER is published monthly on the AAPT website and is distributed to the membership by email. Each issue appears on or about the 1st of each month. The AAPT NEWS eNNOUNCER contains upcoming events and deadlines, member and section news and information, recent news from the worlds of physics and teaching, current promotions and programs, and much more. Download the last issue of AAPT NEWS eNNOUNCER at the following URL: http://www.aapt.org/aboutaapt/ennouncer/index.cfm Better still, you might consider joining the AAPT and attending its national meeting!

ISAAAPT listserv

A listserv is available for ISAAPT members and other Illinois physics teachers who are interested. If you are not on this list but wish to subscribe to it, send the following message to listserv@ilstu.edu, being certain to turn off your signature before sending: SUBSCRIBE isaapt-

UIUC Saturday Physics Honors Program

This outreach program for high school students is also open to the general public. Lectures are free of charge, from 10:15 a.m. to 11:30 a.m., in Room 141, Loomis Laboratory of Physics, 1110 West Green Street, Urbana, Illinois. For details see: http://physics.illinois.edu/outreach/Honors/

Minutes of the Fall 2009 ISAAPT Executive Council Meeting

Saturday, October 17, 2009
Illinois Central College, East Peoria, IL

Call to Order: President Tom Foster called the meeting to order at 7:05 am. Council Members present: President Elect Carl Wenning, Secretary/Treasurer Dave Sykes, Newsletter Editor Brian Davies, Past President Deb Lojkutz, High School Representative Ann Brandon, Doug Brandt, Rob Mason, Zak Knott, Tom Snyder, Ken Mellendorf, Tom Carter, Bill Hogan, Shane Hanson, Andrew Morrison, Chris LaRoche, and Cliff Parker.

A motion to accept the minutes of the spring 2009 Council Meeting was made by Carl and seconded by Deb. The motion
passed without discussion.

**Secretary-Treasurer Report:** Dave reported on the financial status of the ISAAPT. Currently there is $1682 in the treasury. He added that the Rossing Fund has a balance of $30,041 and has actually lost value since the Spring Meeting. He stated that recent fees have been greater than the interest and that he will work with AAPT CFO Michael Brans to have the fees minimized.

**Section Representative Report:** Zak Knott reported that Ann Brandon stood in for him at the national meeting in Ann Arbor. Ann reported that the AAPT was pushing for new members and that for all ISAAPT members who join the AAPT, the ISAAPT would get a kick back of $5-$10. Sites and dates for future national meetings are: Washington, DC, February 13-17, 2010. Portland, Oregon, July 17-21, 2010. Jacksonville, Florida, January 8-12, 2011.

**High School Representative Report:** Ann reported that two publications are out:
1. *Teaching Physics in the First Year* by Mary Winn and Jan Mader.

**Webmaster Report:** Dave Renneke was unable to attend the Council Meeting but he emailed his report earlier. A summary of the report is as follows: Three new web pages have been added to the website - membership form, dues information record, and meeting attendance record. Two web pages have been updated - the membership information page and the home page. Dave also reported that he felt drop-down menus would be an excellent update for the Web site and he encourages anyone interested to help with menu items and phrases for the menus.

In Dave's absence Cecilia Vogel is the official photographer for the meeting.

**Newsletter Report:** Brian reported that the most recent IPT was five pages long and was mailed to 101 members (12 via email). Brian added that he took care of the duplicating and mailing costs.

**Outstanding High School Physics Teacher Award:** Cliff reported that he is now accepting nominations for the 2010 Award.

**Committee for the Distinguished Service Citation Report:** Tom Foster congratulated the 2009 ISAAPT Distinguished Service Citation recipient, Brian Davies.

**Nominating Committee Report:** Deb reported on the slate of candidates for the 2009 ISAAPT elections.
- President-Elect: Doug Brandt
- Secretary/Treasurer: Dave Sykes
- High School Representative: Rebecca Wenning-Vieyra
- Two Year College Representative: Max Lee
- Four Year College Representative: Lenore Horner
- Replacement for Doug Brandt: Ken Wester
- Replacement for Zak Knott: Frank Cange

**Current Meeting Update:** Tom Foster thanked Ken Mellendorf for his work on being host. In response, Ken thanked Joe Bergman of the IACT for all his work to make the meeting a success. Dave added that it would take a couple of weeks to work out the finances with the IACT.

**President:** Tom reported that IACT President Tony Nelson has proposed to have a joint meeting with the ISAAPT on even numbered years at ISU. After some discussion a motion to appoint Carl to meet with the IACT Board to propose to have Joint Fall Meetings with the IACT on even numbered years some place in Central Illinois was made by Tom Carter and seconded by Bill Hogan. The motion passed without discussion.

**Future Meetings:**
- Spring, 2010 (Mar. 26-27): Blackburn College, Carlinville
- Fall, 2010: Sherrard High School, Sherrard
- Spring, 2011: Eastern Illinois University, Charleston
- Fall, 2011: Joliet Junior College, Joliet

**New Business:**
Carl Wenning reported on several issues:
1. The ISAAPT is up for re-approval from the Illinois Board of Education to award CPDU's for ISAAPT meetings. A motion to have Carl apply to the Illinois Board of Education for approval of CPDU's for all ISAAPT meeting talks and workshops was made by Bill Hogan and seconded by Doug Brandt. The motion passed without discussion.

2. The ISAAPT/CSAAPT has been awarded a $2000 grant for the purpose of holding two workshops for new/transition physics teachers. The money will be used to pay the honorarium to a PTRa member (who will facilitate the workshop) and for the books provided to attendees of the workshops.

3. Carl proposed that the ISAAPT facilitate the creation of Local Physics Alliances (LPA's) in Illinois. Carl passed out a map of possible zones for LPA's. Several council members volunteered to be the leader of the zone they reside in. LPA's would serve as a mechanism for teachers to meet with other teachers who are relatively close geographically.

4. Carl proposed that the Teacher Recruitment, Retention, and Development Committee be enlarged and that perhaps LPA leaders comprise the enlarged committee.

5. Carl reported that the ISAAPT guidebook program is up for renewal. A motion to continue the ISAAPT guidebook program was made by Bill Hogan and seconded by Deb Lojkutz. The motion passed without discussion.

6. Carl suggested that we continue to work on the ISAAPT dues structure. Several suggestions were made but all agreed that the discussion needs to include the Webmaster (Dave Renneke was absent from the council meeting).

7. Tom Foster reported that the reciprocal system with the ISTA/ISAAPT websites is now up and running.

Adjournment: A motion for adjournment was made by Tom Carter and seconded by Bill Hogan. The meeting was adjourned at 8:37 am.

Faithfully submitted,

Dave Sykes, Secretary/Treasurer

Treasurer’s Report

Fall Section Meeting – 2009

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