

# THE DIALOG



The Newsletter of the Southern Ohio Section of the American Association of Physics Teachers

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## Election Results – Congratulations!

During the Spring 2013 Meeting, the following officers were elected:

- 1. President Elect – Mark Plano Clark (2013-2016).** The President Elect serves for one (1) year as the pending President, assisting the current President. The one year term of President Elect is followed by one (1) year as President and then one (1) year as Past President. Duties include: engages in duties as assigned by the President, supports the planning of the fall and spring meetings.
- 2. VP 4 Yr. College & Universities - Terry Toepker (2013-2016).** Serves for 3 years. Collaboratively with the VP for 2 Year Colleges and the VP for Secondary Schools is responsible for recruiting of new members and the planning of the fall and spring meetings
- 3. Secretary – Krista Wood (2013-2016)** Serves for 3 years. Is responsible for producing and publishing all meeting minutes, maintaining Section archives

Spring 2014 Elections will be for: VP High Schools & Section Representative.

**President's Corner** Greetings. My name is Lenore Horner and I serve as the 2013-2014 President of the SOS-AAPT. Thank you to all the presenters at our Spring 2013 meeting. I'm eagerly anticipating our Oct. 5 joint meeting with OSAPS, and I encourage all of you to share your ideas and efforts, large or small, then. If you have ideas or suggestions for things SOS-AAPT can do, please share them with me or one of the other officers. - Lenore

## JOINT MEETING OF OSAPS & SOS/AAPT AUTUMN 2013

Hosted by University of Cincinnati's Clifton Campus  
Cincinnati, OH

**SAVE THE DATE!!!**

**Saturday, October 5, 2013**

- This will be a JOINT meeting with Ohio Section of the APS. Come meet with your colleagues from Southern and Central Ohio!
- OSAPS Theme: "Dark Matter, Dark Energy"
- Pick up a few new ideas for your classroom and share a few of your own good ideas!
- Present a contributed paper or a "How I do it" demo!

*PLAN TO COME!*

*ON-LINE REGISTRATION WILL BE AVAILABLE THIS SUMMER AT THE SECTION WEBSITE.*

<http://sosaapt.weebly.com/index.html>

## OTHER AAPT Meetings

July 13-17, 2013, Summer 2013 National Meeting.  
Portland, Oregon <http://aapt.org/Conferences/sm2013/>

TBA Fall 2013 Ohio Section meeting  
<http://www.osaapt.org>

October 15, 2013, Fall 2013 Appalachian Section meeting.  
<http://www.wju.edu/academics/phy/aapt/aapt.htm>

## National AAPT Summer Meeting in Portland – Your Invitation!

Hello Southern Ohio AAPT Member,

The national AAPT has asked us to remind you that the 2013 National AAPT Summer Meeting <http://aapt.org/Conferences/SM2013/> is nearly 2 months away! You are invited to join AAPT in Portland this summer, July 13-17, 2013, for five days jam-packed with keynotes, workshops, and sessions. For a detailed listing of the programming being offered, click here <http://aapt.org/Conferences/sm2013/programpage.cfm> .

We met there just a few summers ago, and the facilities and scenery are simply spectacular. If you're a member of National AAPT, you will receive the lowest rate for registration, \$360 early bird registration rate versus \$683 on-site.

If you're not a member, it's not too late to join and take advantage of huge savings; join now by clicking here <http://aapt.org/Membership/joining.cfm>.

Early Bird registration ends Friday, May 10, 2013! This is your chance to save over \$300. Click this link to register today! <http://aapt.org/Conferences/sm2013/registrationpage.cfm>

If you already have a system ID, use it to register online <http://aapt.org/Conferences/sm2013/registrationpage.cfm> instantly or call AAPT at 301-209-3340; they will be happy to assist.

If not, don't worry, you can create a free AAPT account by clicking here <http://iweb.aapt.org/iweb/Profile/CreateNewUser.aspx?iWebContinuePage=%2fiWeb%2fProfile%2fViewProfile.aspx> .

Join our section and AAPT as we Go Green in Portland this summer! Register today! <http://aapt.org/Conferences/sm2013/registrationpage.cfm>

Sincerely,

Kathy Harper, Southern Ohio Section Representative to the national AAPT

### Helpful Links

2013 AAPT Summer Meeting: <http://aapt.org/Conferences/SM2013/>

2013 AAPT Summer Meeting Programs: <http://aapt.org/Conferences/sm2013/programpage.cfm>

Join AAPT: <http://bit.ly/aaptjoin>

Create a Free AAPT Account: <http://bit.ly/aaptnewuser>

## **Another Invitation!! SOSAAPT / OSAPS Autumn Meeting in Cincinnati!**

The autumn meeting of the Southern Ohio Section of the American Association of Physics Teachers (SOS/AAPT) will be on Saturday October 5, 2013 at the University of Cincinnati's Clifton Campus in Cincinnati, Ohio. This will be a joint meeting with the Ohio Regional Section of the American Physical Society (OS/APS). Plans are still being finalized but here is a short synopsis of the current thoughts.

Technically the SOS/AAPT meeting will begin on Saturday morning and extend into Saturday afternoon as is customary at our meetings.

The OS/APS meetings normally take two days, starting early on Friday afternoon (that is, October 4<sup>th</sup>, this fall) with several speakers and a poster session with a banquet on Friday evening. Contributed Papers usually start on Saturday (October 5<sup>th</sup>) morning, followed by speakers and adjournment before lunch. The OS/APS meetings usually have a theme and the theme for the autumn 2013 meeting is "Dark Matter, Dark Energy."

In this joint meeting, anyone who registers as an SOS/AAPT member is able to attend any function of the OS/APS meeting and anyone who registers as an OS/APS member is able to attend any function of the SOS/AAPT meeting. Of course, if there is an additional fee attached to a particular session (e.g., the OS/APS Banquet on Friday evening or the SOS/AAPT lunch on Saturday afternoon) the person must pay that additional amount.

The thought is that the SOS/AAPT will begin with an early-morning executive committee meeting, share the parallel Contributed Paper sessions (we will probably have at least one of these sessions devoted to Physics Education) and probably share at least one of the Saturday morning invited speakers with OS/APS. The SOS/AAPT could then have an invited speaker, lunch, the how-I-Do-It sessions, the business meeting, and workshops.

Details of the meeting will be available on the SOS/AAPT website and UC meeting website (when it comes on line) as they are finalized. The registration information will be available by the end of summer.

We are really looking forward to seeing everyone at this meeting. It should be a great opportunity to renew the contacts with fellow Physicists from our area as well as to meet with researchers and theorists from the OS/APS group. Be certain to mark the dates on your calendar at this time and be watching as the meeting details are finalized.

---Jim Sullivan, University of Cincinnati , [james.sullivan@uc.edu](mailto:james.sullivan@uc.edu)

## SPRING 2013 SOS/AAPT MEETING PROGRAM AND ABSTRACTS

Dublin Jerome High School      Saturday, March 9, 2013      9:00 AM – 2:30 PM

8:30 AM – 9:15 AM      SOS/AAPT Executive Committee meeting

9:00 AM – 9:25 AM      **Registration, Coffee & Pastries**

9:25 AM – 9:30 AM      **Welcome & Introductions**

9:30 AM – 10:15 AM      **Keynote speakers:**  
Kathy Koenig, University of Cincinnati  
Flipped Classroom I

10:20 AM – 11:05 AM      Brooke Morin, The Ohio State University  
Flipped Classroom II

11:15 AM – 12:15      **Parallel Sessions - Choose ONE**  
GeoGebra    by Lenore Horner, The Seven Hills  
  
Podcasts    by Rick Jacox, Ontario High School

12:15 AM – 1:00      **Lunch and Networking**

1:00 PM – 1:45 PM      **Contributed Talks**

1:00 PM – 1:15 PM      James F. Sullivan, University of Cincinnati  
Introductory Physics Courses in the Semester System

1:15 PM – 1:45 PM      Gordon J. Aubrecht, II, Ohio State University, Columbus and Marion, Ohio  
1. How Earth's temperature is reflected on smaller geographic scales  
2. Why formative assessment can be useful to teachers

1:45 PM – 1:50 PM      **“How I Do It” Presentations**  
  
Richard Taylor, [Depart. of Physics & Engineering, Muskingum Univ.](#)  
Projectile Motion with Air Resistance: Computer Lab for Calculus-Based  
Physics

2:00 PM – 2:30 PM      **General Business Meeting and Door Prizes**

**\*Please note that the Keynote Speaker Presentations are available for viewing at:**  
<http://sosaapt.weebly.com/spring-2013-files.html>

**James F. Sullivan**, Department of Physics, University of Cincinnati, Cincinnati, OH 45221-0011.  
[james.sullivan@uc.edu](mailto:james.sullivan@uc.edu)  
Introductory Physics Courses in the Semester System,

Beginning in the autumn of 2012 the University of Cincinnati, as well as many other institutions in Ohio changed from a quarter (term) calendar to a semester calendar. At this time the state also initiated a TAG program that attempts to insure uniform courses throughout the state system of higher education. A report on how these changes in the two basic introductory Physics Courses (Calculus-based and algebra/Trigonometry based) at the University of Cincinnati will be given here.

**Gordon J. Aubrecht, II**, Department of Physics, Ohio State University, Columbus and Marion, Ohio  
[aubrecht.1@osu.edu](mailto:aubrecht.1@osu.edu)  
How Earth's temperature is reflected on smaller geographic scales

One consequence of human use of energy is emission of greenhouse gases. Many nonscientists (as well as a few real scientists) do not think that climate change could be caused by human actions. Reasons range from doubt that tiny humans could affect an entire planet to belief that human life on Earth will soon end. Science is about experimental data, reasoning from those data, and theoretical perspectives supported by the data. Svante Arrhenius provided (in 1896) the first theoretical (and compelling) reasons that carbon dioxide could influence Earth's energy budget. Multiple sources of modern data underlie the belief of virtually all climate scientists that humans are changing our climate. Earth's temperature is rising. Is the rise distributed uniformly around the world? We compare the world record to the US and Australian records, and those to records in a small part of the US to see what the temperature data show.

Why formative assessment can be useful to teachers

Formative assessments can allow teachers to understand what is and is not working in their classrooms for the purpose of changing how they teach various content. We have helped middle and high school teachers approach formative assessment of open-ended questions. We ask that teachers identify (written) student ideas for the pretest and see how they might affect the way they present content; then for the posttest, we ask them to identify on the basis of changes in responses and the sorts of responses how they would change their teaching of the content the next time. This study presents a model, as well as its application, for the development of formative assessments in the classroom in a rurally located, city high-needs district in the state of Ohio. Results indicate changes not only in the way teachers view their pedagogical approaches, but in teacher subject knowledge.

**SOS/AAPT Business Meeting Minutes - DRAFT**  
**Dublin Jerome High School - Dublin, OH**  
**9 March 2013**

Meeting called to order by President Doty at 2:13 pm.

- I. Thanks to Barb Hilgross for hosting this Spring SOS/AAPT meeting.
- II. Officer Elections. The following were elected for terms 2013-2016
  1. President Elect – Mark Plano Clark
  2. VP 4 Yr. College & Universities – Terry Toepker
  3. Secretary – Krista Wood
- III. Treasurer Report – Bill Kuhlman
  1. \$2730.18 in checking
  2. CD current \$2029
- IV. SOS/AAPT Section Representative to AAPT, Kathy Harper, report  
National AAPT Future meetings
  1. Summer 2013, Portland, OR, Hilton
  2. Winter 2014, Orlando, FL, beginning of January
  3. Summer 2014, Minneapolis, MN, University of Minnesota campus
  4. Winter 2015, San Diego, CA, Town & Country Suites/Resort
- V. Future SOS/AAPT Meeting Dates
  1. Fall 2013, October 5, 2013. Joint meeting with OSAPS. At University of Cincinnati.  
OSAPS Theme: Dark Matter, Dark Energy
- VI. Announcements
  1. Advanced Lab Physics programs flyer
  2. State Science Day, May 11<sup>th</sup> at OSU. Need volunteers to judge.  
Contact Gordon Aubrecht.
- VII. Pass the gavel – Lenore Horner presented as President of SOS/AAPT
- VIII. Door prizes given away

**OFFICERS****SECTION REPRESENTATIVE**

Kathleen A. Harper (05/31/2014)  
The Ohio State University  
[harper.217@osu.edu](mailto:harper.217@osu.edu)

**PRESIDENT**

Lenore Horner (05/31/2014)  
The Seven Hills School  
[Lenore.Horner@7Hills.org](mailto:Lenore.Horner@7Hills.org)

**PRESIDENT ELECT**

Mark Plano Clark (05/31/2014)  
University of Cincinnati  
[mark.planoclark@uc.edu](mailto:mark.planoclark@uc.edu)  
[planocmk@UCMAIL.UC.EDU](mailto:planocmk@UCMAIL.UC.EDU)

**VICE PRES - UNIV/4 YR. COLL**

Terry Toepker (05/31/2016)  
Xavier University  
[toepker@xavier.edu](mailto:toepker@xavier.edu)

**VICE PRESIDENT - 2 YEAR COLLEGES**

Darwin Church (05/31/2015)  
University of Cincinnati - Clermont  
[darwin.church@uc.edu](mailto:darwin.church@uc.edu)

**VICE PRESIDENT - HIGH SCHOOLS**

Kevin C. McChesney (05/31/2014)  
Pickerington High School Central  
[phsc.physics@gmail.com](mailto:phsc.physics@gmail.com)

**SECRETARY**

Krista E. Wood (05/31/2016)  
Univ of Cincinnati – Blue Ash  
[krista.wood@uc.edu](mailto:krista.wood@uc.edu)

**ASSOCIATE SECRETARY**

James F. Sullivan (appointed)  
University of Cincinnati  
[james.sullivan@uc.edu](mailto:james.sullivan@uc.edu)

**TREASURER**

William H. Kuhlman (05/31/2015)  
St Xavier HS  
[wkuhlman@cinci.rr.com](mailto:wkuhlman@cinci.rr.com)

**PAST PRESIDENT**

Sandra L. Doty (05/31/2014)  
Ohio Univ - Lancaster  
[dotys@ohio.edu](mailto:dotys@ohio.edu)

**AT LARGE**

Elizabeth George (appointed)  
Wittenberg Univ  
[egeorge@wittenberg.edu](mailto:egeorge@wittenberg.edu)

Gordon J. Aubrecht II (appointed)  
The Ohio State Univ - Marion  
[aubrecht.1@osu.edu](mailto:aubrecht.1@osu.edu)

For the latest SOS-AAPT information  
please visit our website at:

<http://sosaapt.weebly.com/index.html>

Suggestions?

Questions?

Got an idea on how to improve the  
section or ideas on how we can help  
you?

**PLEASE CONTACT ANY ONE OF  
THE SECTION OFFICERS!**