

Mississippi Association of Physicists

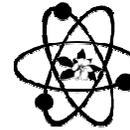


*The Mississippi Section of the
American Association of
Physics Teachers*

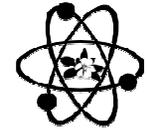
November 2007

No. 077

NEWSLETTER



FALL MEETING



**Meeting Agenda, Saturday 3 November 2007.
MSU CAVS, Canton, MS**

The University of Mississippi
Department of Physics & Astronomy
University, MS 38677

0830 – 0900	Registration
0900 – 0915	Welcome, CAVS
0915 – 0930	Business Meeting: Minutes and Treasurer's Report
0930 – 1000	Rod Schwartz, Nissan North America
1000 – 1015	Break
1015 – 1100	Richard Peterson, Bethel University
1100 – 1200	Optics Demonstrations
1200 – 1300	Lunch, CAVS Facility (Exec Board Meets)
1300 – 1330	Clay Walden, CAVS Information and Tour
1330 – 1400	Marco Cavaglia, LIGO
1400 – 1500	Discussions
1500	Adjourn

President's Message



As educators, I know that we are all caught up in the excitement and activity of a new academic year. This year brings added excitement as I look forward to the next MAP meeting in November. We will meet at the Mississippi State University Center for

Advanced Vehicular Studies (CAVS) in Canton, Mississippi. For those of you not familiar with the CAVS, it is a multi-disciplinary center located adjacent to the Nissan plant that focuses on developing superior computational, engineering, manufacturing, design, and information technologies relevant to Mississippi industries. Clay Walden will be our host and will lead us on a tour of the CAVS facility. We have some excellent speakers lined up for the meeting. Rob Swartz, from the Nissan North America, will present a talk on operations at the Nissan facility. With the financial support of the AAPT, Professor Richard Peterson of Bethel University, St. Paul, MN will join us to speak on lasers and optics in interferometric and holographic measurements. Professor Peterson is a Past President of AAPT and is well-known for his exciting laser and optics talks. Dr.

Marco Cavaglià will present information on Mississippi's participation in the Laser Interferometer Gravitational-wave Observatory (LIGO). **To complement this talk, I invite everyone to bring along a 2 minute optics demo to present at the meeting.** I have invited the Alabama and Louisiana Sections to join us at this meeting. I know you won't want to miss this opportunity to meet with your fellow Section members in Canton.

Our web page is up and running and can be viewed at msphysics.org or from a link on the AAPT page, aapt.org/Sections/Map.cfm. The page will have information that will facilitate your attendance at the meeting.

I want to thank all of you that helped out with these activities and have eased my transition into the presidency of MAP. We are already planning the Spring 2008 MAP meeting and will tentatively meet at the Grand Gulf Nuclear Station in Port Gibson, MS.

We will have a dinner gathering the evening before the meeting. For more information go to msphysics.org.

Optics Demonstrations

Participate! Do you have an interesting demonstration in the field of optics that other teachers might find useful? If so, bring it along to present at the meeting. Each demo should be about 2-3 minutes long, but time may vary depending on how many we have.

Hotel Information for Fall 2007 MAP meeting

There are several motels near the CAVS facility. These include a Hampton Inn, Comfort Inn, Best Western Inn and Quality Inn, all adjacent to each other and at an address between 125 and 145 Soldier Colony Rd. Take Exit 119 from I-55 and go east on MS route 22, turn south on Soldier Colony Rd. Rates at the Hampton Inn are \$88 single and \$95 double without discounts. Further information including directions and phone numbers for reservations can be found at www.msphysics.org.

Officers and Executive Board Members

MAP Officers, 2007-2008: President – Jim Sabatier (sabatier@olemiss.edu)
Vice-President – Larry Croft (wlcroft@bellsouth.net)
Secretary - Manaf Ali (mhali@northwestms.edu)
Treasurer - Willie Newell (willie.newell@jcc.edu)
Section Representative - Sandra Harpole (sharpole@ra.msstate.edu)
Webmaster - Libby Furr (libby@olemiss.edu)
Newsletter Editor – Cherry Douglas (cherry@phy.olemiss.edu)

Executive Board Members: 4 year colleges – Larry Croft, Jim Sabatier*
2 year colleges – Kevin McKone, Mary Boleware*
High Schools – Darla Nash, Tommy Sumrall*
At-Large – Thomas Jamerson, Manaf Ali*

Asterisk denotes 2007 elected board members.

Spring 2007 MAP Minutes

The Mississippi Section of AAPT met on 17 February 2007 at University of Southern Mississippi, Hattiesburg, MS. The meeting was called to order by President Paul Guichi. The High School Physics Teacher Award was presented to Keene Golding. Keene teaches at Hancock County High School. The meeting program consisted of two formal presentations, one by Chris Sirola on the status of physics education in the state and another by Alinas Gearba about the Absolute Zero project. Tours of the research laboratories were then conducted. The business part of the meeting included election of new Executive Board members and officers, discussion about future meeting locations, outside speakers and the web page. April Fowler led the new board member and officer election process. Sandra Harpole, MAP Section Representative made a short presentation. She said AAPT can provide speakers for Section meetings and that we might want to follow up and determine the cost and potential opportunities. Possible locations for the next meeting, Fall 2007, were discussed. We decided to consider the Nissan Plant via CAVS MSU facility for the Fall meeting location. Clay Walton was mentioned as the point of contact at the CAVS facility. Grand Gulf Nuclear Power Plant remains an option as well. There was discussion about updating the MAP web site. Hank Bass agreed, with help from Larry Croft, to this task.

About AAPT

AAPT was established in 1930 with the fundamental goal of ensuring the "dissemination of knowledge of physics, particularly by way of teaching." We currently have more than 10,500 members in 30 countries around the world.

[Annual Meetings](#) in winter and summer provide our members with the opportunity to network, discuss innovations in teaching methods, and share the results of research about teaching and learning. In addition to these meetings, we host or support smaller [workshops and conferences](#) and [symposia](#) throughout the year to provide further opportunities for professional development and knowledge sharing.

We also publish two major peer-reviewed journals, the [American Journal of Physics](#) and [The Physics Teacher](#). These journals provide a medium for sharing methods and research about teaching physics at introductory and advanced levels. In 2007, we launched a new general-interest magazine, [Interactions Across Physics and Education](#). All AAPT members receive *Interactions* and their choice of one of the journals as part of their [membership](#).

We also participate in or sponsors many [projects](#) related to improving the teaching of physics. And we offer [awards and grants](#) for educators and we sponsor or participate in many [contests and competitions](#) for physics students.

For more information about joining AAPT, go to <http://www.aapt.org>.

The above information is reprinted from the AAPT website.

FALL MEETING SPEAKERS

Richard W. Peterson, University Professor of Physics, Bethel University, St. Paul, MN



Richard Peterson (Bethel University) – Lasers and optics in interferometric and holographic measurements. Dr. Peterson's research interests involve new methods of performing highly-transient interferometric and holographic measurements. Dick was awarded the 1998 American Physical Society's (APS) Prize for outstanding research at an undergraduate school in the U.S. and was elected a Fellow of the APS in 2005. During 2005 – 2007 he served as national President/Past President of AAPT and has also served 4 years as a Director on the American Institute of Physics Governing Board

Rod Schwartz, Engineering Manager Nissan North America

Rod Schwartz (Nissan North America) – Automobile manufacturing. Rod is the Engineering Manager of the Body and Stamping plants in Nissan's 3.5 million ft² automotive manufacturing facility located in Canton, MS. The responsibilities of his team of 20+ Engineers includes controlling the intricate manufacturing processes required to build any one of the five different vehicles produced in Canton, while maintaining the high levels of repeatability required in today's efficient world of mass production. Rod will use his 20 years of automotive experience to convey the processes and functions of an automotive assembly plant capable of producing over 400,000 vehicles per year.

Marco Cavaglià, Assistant Professor University of Mississippi

Marco Cavaglià (University of Mississippi) – Laser Interferometer Gravitational-wave Observatory (LIGO) in Mississippi. Dr. Cavaglià's current research interests focus on gravitational waves and black holes physics. He collaborates to the German Max-Planck Institut Outreach Program "Einstein Online", the Italian "Science for All" and the National Geographic KIDS Magazine. The NSF-sponsored LIGO Scientific Collaboration (LSC) consists of more than 500 scientists from 47 institutions worldwide, working together to achieve the first-ever detection of a gravitational wave. One of the three LSC interferometers is located near Livingston (LA), about two hours south of Jackson MS. Researchers at the University of Mississippi will contribute in the areas of data analysis, detector characterization and outreach

A Wireless Dynamic Sensor System, Bluetooth dongle, and Logger Pro will be provided by Vernier Software & Technology as a door prize!

CALL FOR NOMINATIONS - Please Respond Outstanding High School Physics Teacher Award

Each year at its spring meeting the Mississippi Association of Physicists presents a certificate and a cash award to a Mississippi high school teacher chosen for outstanding accomplishments in physics teaching. To be considered for the award, a deserving teacher must first be nominated by a student, a colleague, a principal, a parent-anyone - including the teacher. Nominations are reviewed and researched by a MAP committee established for this purpose.

In addition to this form, the nomination should be supported with a profile from the nominee which includes the following information: Name, undergraduate major and year degree was obtained; academic honors; graduate education and year(s); number of years teaching experience; subjects taught; schools where employed (name, place, years); honors and recognition as a teacher; honors and recognition in science of any present or former students; professional organization memberships and affiliations; papers which describe unique or innovative features which indicate the excellence of your physics program. Supporting letters from administrators, colleagues, and students (three maximum) are strongly encouraged. DEADLINE: January 15, 2008.

Nomination for Award Excellence in High School Physics Teaching 2007-08

Name of Nominee: _____

School: _____

School Address: _____

Courses Taught: _____

Comments (Attach additional sheets if needed): _____

Name of Nominator: _____

Address of Nominator: _____

Phone Number of Nominator: _____

Mail to: Jim Sabatier, NCPA, P.O. Box 1848, University, MS 38655



2007 High School Physics Teacher Award

MAP is proud to recognize Mr. Keene Golding as this year's recipient of the Outstanding Physics Award. Keene teaches physics at Hancock County High School and has been bringing high school physics teams to the USM High School Physics Competition where they have done well. Keene received his physics education from USM. The award comes with a cash prize and a one-year subscription to AAPT. Congratulations to Keene!

Mississippi Association of Physicists <http://msphysics.org>

The Mississippi Association of Physicists (MAP) was established in 1970. It is the Mississippi Section of the American Association of Physics Teachers. Its goals are:

- To provide an opportunity for the physicists of the state and physics and physical science teachers to get to know their colleagues at other institutions.
- To provide a means for greater cooperation among the physics departments in the universities, colleges, junior colleges, and high schools in promoting teaching and research.
- To provide a better program of consultation between the universities, colleges, junior colleges, and high schools.
- To provide a cooperative effort among all universities, colleges, junior colleges, and high schools to strengthen the teaching of physics at all levels.
- To improve the public understanding of science.

Membership is open to all people interested in promoting physics. Teachers, professors, and industrial physicists are encouraged to join. Annual membership dues are \$5.00. MAP meetings are held semiannually.

MAP Membership Application

Please print or type

Name: _____

Last First Middle/Maiden

Address: _____

Street/P.O.Box Apt.# _____

City State _____

Zip _____

Phone Number: (circle one: work or home) _____

Email address: _____

Institution: _____

Job Title/Area of Certification: _____

Number of Years Experience: _____ **Are you a member of AAPT?** _____

Send the completed membership application and a check or money order of \$5 for membership dues to:

Willie Newell, MAP Treasurer
Jones County Junior College
900 South Court Street
Ellisville, MS 39437