

Friday, October 8, 2004

The annual AOK Section meeting took place at the University of Arkansas at Little Rock, Arkansas on Friday October 8 and Saturday October 9th. The meeting was hosted by the AOK Vice President Dr. Al J. Adams of the University of Arkansas at Little Rock his administrative assistant Ms. Debby Herden, and physics colleagues and staff assistants.

Numerous activities occurred on both days of the meeting. On Friday members were given the opportunity to participate in four different workshops conducted by *Dr. Al Adams* and the Arkansas Physics Lending Library (APLL). These workshops covered the topics of Heat & Temperature, Motion & Forces, Electricity & Magnetism, and Waves & Optics. There were additional workshop offered both days on the TI-Navigator by *Tracy Watson*, Department of Mathematics and Statistics at UALR as well as two Saturday workshop on Modeling Physics led by *Shane Thompson* of the Arkansas School for Math, Science, and the Arts.

Friday's daytime activities concluded with tours of the University's Laboratory facilities. A social hour was held before the annual Banquet and evening speaker presentation. Approximately 75 people attended the evening banquet and listened to the excellent presentation by Dr. John S. Rigden of Washington University in St. Louis. Dr. Rigden's presentation was titled: Einstein: Why the Standard of Greatness? His abstract parallels the themes of the World Year of Physics activities that AAPT is helping to promote during 2005, the "*World Year of Physics*."

Dr. Rigden's abstract was as follows.

Albert Einstein occupies a unique place in the modern mind because he was a physicist and because physics has a special mystique. He is the standard of intelligence and, for that reason; he is the standard of greatness. The intellectual outpouring that Einstein exhibited in 1905 with five ground-breaking papers in a seven month period is unequalled in the history of science. He challenged 100 years of confirmed wisdom with his March quantum theory of light (the only 1905 paper Einstein regarded as revolutionary); he established molecular dimensions, verified the statistical nature of thermodynamics, reconstructed space and time, and showed that energy and mass were the same thing ($E = mc^2$). All this he did by means of pure reason and by so doing, Einstein touched the minds and emotions of *Homo sapiens*, the thinking animal.

An Executive Council Meeting followed the banquet, award presentation and dinner speaker. During this meeting a slate of officer candidates were discussed. Upcoming meeting and national AAPT meeting reports were delivered to the executive council. Treasurer's report, Secretary notes, and updates on sectional activities were given.

Saturday, October 9, 2004

Saturday's meeting was filled with a number of contributed papers. Two concurrent workshops and an invited key note address also given by Dr. Rigden. A summary of the titles of these contributed papers, and the presenter of the talks is listed in this section report.

Keynote Address

A Candle, a Bushel Basket, and Physicists *John Rigden* Washington University in St. Louis

Morning Session Papers:

Coriolis Confusion *Ivan V. Griffin* Tulsa Community College
Analogies for Teaching/Assessing Trick or Treat? *Peter Fletcher* Kansas St. University
Students' Knowledge of Structure of Matter *Lili Cui* Kansas St. University
NFO WebScope *Al Grauer* University of Arkansas Little Rock

Mid Morning Paper session

Modern Miracle Medical Machines *Bijaya Aryal* Kansas St. University
Movie Physics: Transfer of Knowledge *Carina Poltera* Kansas St. University
Council on Undergrad Research (CUR) *Mostafa Hemmati* Arkansas Tech University
Speededness & Classroom Response Systems *Daniel Bullock* Arkansas Tech University
DyKnow: A tool for collaborative learning *Stephen Addison* University of Cent. Arkansas
Web Support for Teacher Preparation *Brian Adrian* Kansas St. University
TIR Program Announcement *David Young & Donna Owen* U of Arkansas, Fayetteville

Afternoon Paper Session

Students' Models of X-rays & Interactions *Spartak Kalita* Kansas St. University
Standard Model of Elementary Particles *Wilhelm Richter* Ark. School for Math, Science
Inquiry-Based P.Science/Preservice Elem. Teachers *Zdeslav Hrepic* Fort Hayes St.
Qualitative Exam Prelab Questions in Intro Lab *Karen Williams* East Central University
Eliciting/Representing Hybrid Mental Models *Zdeslav Hrepic* Kansas St. University
Success of Minority Students in Physics *Carl T. Rutledge* East Central University
Mental Models: Atomic Friction & Lubrication *Edgar Corpuz* Kansas St. University
Prior Math Performance Predicting Physics Grades *Rudolf L. Eichenberger* So. Arkansas U
Using Graphical Analysis to Curve Fit Potentials *Jim Johnson* Emporia State University
Service Learning & Introductory Physics Student *Jeff W. Laub* Ark. School Math, Science
Action Research Task-Analysis Model *Linda Kondrick* Arkansas Tech University
Retention and Transfer from Trigonometry to Alg.-based Physics *N. Sanjay Rebello*
Kansas St. University

AOK Section Business Meeting

The slate of officers were presented, voted on and approved by the general membership. This list will appear in the announcer at a later time. The presidential chain rotated and the official meeting locations were decided upon for the next three years. The next meeting for the AOK section will be held at Oklahoma City Community College sometime next fall. Themes and ideas for papers, workshops and activities should be directed to the meeting host Debra Burris. The 2006 section meeting will be held at Emporia State University, in Emporia, Kansas. It will be hosted by Jim Johnson, current rural PTRA site host. Jim will be also looking for ideas for his meeting and hopes to coordinate some activities with the rural PTRA group. The next meeting in Arkansas (2007) will be hosted by Stephen Addison at the University of Central Arkansas in Conway, Arkansas. The three year cycle of meetings and their hosts were approved along with the vote of the membership officers slate. Updated copies of the revisions from the AOK constitution were available for the membership and proclamations and thanks for Dr. Al Adams, Debby Herden and UALR faculty and staff were read by N. Sanjay Rebello and accepted by the membership. It was noted that David A. Young, of Fayetteville High School was awarded the AOK Outstanding High School Physics Teacher award and accepted his plaque and honorarium. Texas instruments also presented three special awards to Arkansas physics teachers who have earned National Board Certification: Mr. Dwight Daugherty of Cabot High School, Ms Nelene Harris of Fouke High School, and Mr. Alan Hayes of Genoa Central High School. TI

awarded each of these recipients one of their new graphing calculator models, the TI-84 Silver Edition, a TI Ranger, and a cash award.

The meeting ended with the door prize drawing which included materials from Pasco, Ztec, Vernier, and Texas Instruments. All traveling physicists started their long journeys back home.

Submitted by
Todd R. Leif
AOK Section Representative