

AOK Section Meeting Fall 2011

Meeting Review: Submitted by Section Representative Todd R. Leif

Building Scientific Literacy in a Modern World was the theme for the October 14-15, annual AOK-AAPT meeting held on the beautiful campus of Northwest Arkansas Community College in Bentonville, Arkansas. Hosting the event was C. Dianne Phillips, EMPACTS Facilitator/Faculty Trainer from NWACC.

The registration and Friday afternoon activities included tours of the University of Arkansas Physics Laboratories at the neighboring University of Arkansas. These tours were given by the following researchers and the topics of their research areas are included. Dr. William Olivers; *"Materials Under Extreme Conditions ,"* Dr. Surendra Singh; *"Optics and Lasers"*, Dr. Gregory J. Salamo; *"Nanoscience Technology"*, Dr. Paul Thibado; *"STM of Graphene in Physics"*, Dr. Min Xiao; *"Quantum and Nonlinear Optics"*, Dr. Eitan Gross; *"Neural Computation Lab"* and Dr. Jak Tchakhalian *"Artificial Quantum Materials"*.

The Laboratory tours were followed by a physics colloquium at University of Arkansas titled *"First-Principles Studies of Out-of-Equilibrium Charge Dynamics and Rectification at Nanoscale Interfaces"*. This special talk was given by Pierre Darancet of the Lawrence Berkeley National Lab who was visiting U of A. After a busy and interesting afternoon members of the AOK Section returned to Bentonville where the afternoon activities were followed by a social hour back on the NWACC campus at Shewmaker Center. This is where the annual AOK Physics teacher's banquet was held. The banquet speaker was The University of Arkansas's Dr. Gay Stewart, current AAPT Vice President. The theme of her presentation was *"Physics Education and Building Positive Dispositions"* Chef Lou Rice created the meal for the banquet which was enjoyed by all.

Nearly 30 people were in attendance at the Saturday morning and afternoon activities. As usual fine breakfast snacks were available and an excellent lunch was prepared by Chef Lou and the staff at the Shewmaker Center. Lunch was provided by NWACC with the luncheon speaker being Art Hobson Professor Emeritus of Physics, University of Arkansas, Fayetteville. Dr. Hobson discussed various ideas from his Liberal Arts Physics Textbook *"Physics : Concepts & Connections" including focusing in on the topic "Strategies for building Scientific Literacy"*,

The activities throughout the day included talks by members of the AOK section.

A brief summary of the morning talks are listed below.

- New Faculty Experience for Two-Year College Physics Instructors Dr. Todd Leif Cloud County CC
- Revitalizing College Physics at UALR Dr. Al Adams University of Arkansas Little Rock
- Physicists and Scientists on TV... is THAT really us? Dr. Karen Williams East Central University
- Teaching Diversity and the Nature of Science Network in an EMPACTS Astronomy Classroom. Dr. D.L. Androes Northwest Arkansas CC
- EMPACTS: Educationally Managed Project-based Advancing Curriculum, Technology, and Service. Marvin Galloway Northwest Arkansas CC

This was followed by a Round Table Activity/Discussion by C. Dianne Phillips, "How do we increase critical thinking skill in our students?"

Additionally, the morning session was concluded with a poster session while lunch was being brought in. Three poster presentations were viewed. They were authored by and titled, the following:

- *"Student Opinions on a Blended Astronomy Course."* Dr. Carl Rutledge East Central University, Ada OK
- *"Development, Implementation and Assessment of Ultrasound Physics Laboratory Course."* Dr. Karen Williams, Rutledge East Central University, Ada OK
- *"Curriculum centered, project based learning in the sciences."* C. Dianne Phillips, EMPACTS, North West Arkansas CC

Additional activities throughout the day included talks by these members of the AOK section. A brief summary of the afternoon talks *"Using Technology to enhance Learning in the Classroom and Laboratory Session"* are listed below.

- Using an Open Source Programmable Microcontroller to Visualize Chaos. Dr. Juan Serna University of Arkansas, Monticello.
- Laboratory measurements for our Life Science students. Dr. Al Adams University of Arkansas, Little Rock
- Creative Learning of Physics Dr. Michael Zelin North West Arkansas Community College Applications of the Vernier Power Amplifier Dr. Al Adams University of Arkansas, Little Rock
- Using the Xbox Kinect Sensor for Physics Experimentation Dr. Jorge Ballester Emporia State University, Emporia, Kansas
- Creating screencasts is Easy and Can be a Vital Resource Dr. Steve Maier North West Oklahoma State University

Following the presentations the AOK Section had their annual business meeting. Section Representative Todd Leif conducted the meeting in President Dr. Sytil K. Murphy absence, who has moved on from a post-doctoral research position at Kansas State University to Shepherd University. The meeting basically included the election of new officers for the upcoming year as well as verification of future meeting sites and hosts. The following people were elected via a uncontested ballot and will serve their terms accordingly. The list of these officers is shown below. Next year's meeting will be held at Dr. Steve Maier North West Oklahoma State University facilities sometime in the fall. Additionally, Anne Gillas and Danny Mattern have agreed to host the following meeting Fall 2013 at Butler Community College in El Dorado, Kansas