



Building Innovative Programs: Preparing Highly Qualified Physics and Physical Science K-12 Teachers

2006 PTEC National Conference

Where: University of Arkansas, Fayetteville, AR

When: March 24-25, 2006

Info: www.ptec.org/conferences

Cost: \$100 (waived for Coalition members)

Overview

The goal of PTEC conferences is to bring together individuals and organizations concerned about the critical need to increase the number and quality of physics and physical science K-12 teachers in this country. This conference will explore, via workshops, plenary and poster sessions, the components of highly successful science teacher preparation programs. These components include: recruitment, induction/mentoring, early teaching experience, integrated content and pedagogy, research-based physics teaching, the role of master teachers, and effective bridges between critical stakeholders (school districts, physics departments, and education departments). Since teacher preparation programs are diverse, considerable time has been built into the conference for networking and one-on-one discussions with workshop leaders and other conference attendees.

An overarching goal is educating teachers in the style they will eventually use in the classroom, so a number of sessions of the conference focus on university-level curriculum and pedagogy appropriate for high school physics and K-12 physical science teachers. As the curriculum is strongly influenced by Physics Education Research (PER), the conference will also feature results of contemporary work being done in the field, with PER-based applications and insights reported.

Workshops

Here is a partial list of workshops: (offered in 90-minute sessions with three running concurrently)

- *Physics by Inquiry*, Paula Heron (University of Washington)
- *Middle School Physical Science Curriculum*, Fred Goldberg, San Diego State University
- *CASTLE*, Camille Wainwright (Pacific University)
- *Learning Assistants*, Valerie Otero (University of Colorado at Boulder), Stamatis Vokos (Seattle Pacific University), and Gay Stewart (University of Arkansas at Fayetteville)
- *Assessment Strategies Based on NSES*, Cody Sandifer (Towson University)
- *Can Virtual Electrical Circuits Labs Successfully Replace Traditional Labs?*, Noah Finkelstein (University of Colorado at Boulder)
- *Pedagogical Content Knowledge*, Eugenia Etkina (Rutgers University)
- *NCATE Licensure Standards Developed by NSTA*, Marcia Fetters (Western Michigan University)

PhysTEC and PTEC are funded by the National Science Foundation (NSF), the Fund for the Improvement of Postsecondary Education (FIPSE) of the U.S. Department of Education, and corporate and individual contributions to the American Physical Society's Campaign for the 21st Century.

Reducing Teacher Isolation: Induction and Mentoring, Dale Freeland (Portage High School and Teacher-in-Residence at Western Michigan University) and Julia Olsen (Teacher-in-Residence at the University of Arizona)

Plenary Sessions:

- Michael Marder (Co-Director of UTeach, University of Texas at Austin)
- Joan Prival (Program Director, NSF Division of Undergraduate Education)

Contributed Poster Sessions:

The deadline for title and abstract is February 15th.

Post Conference Workshop:

A free post-conference workshop on the nationally-recognized curriculum: Physics for Elementary Teachers (PET) given by its primary developer, Fred Goldberg (San Diego State University). It will be held on Sunday from 9AM to 3PM.

Conference Registration Fee: \$100

This registration includes all conference sessions, lunch and dinner both days, abundant snacks at breaks, local transportation from the Radisson Inn to the Conference, transportation to and from the Northwest Arkansas Regional Airport (XNA) and the post-conference workshop.

...but the fee is waived for Coalition members

As a benefit of Coalition membership, the conference fee is waived. In addition, Coalition members who attend can receive \$50 towards travel expenses. To join the Coalition, visit our website at www.PTEC.org.

To Register and To Find Out More

Go to the Conferences section of the PTEC website at <http://www.ptec.org/conferences>.

About PTEC and PhysTEC

PTEC is a broad coalition of college and university physics departments that are working together to increase the number of qualified high school physics teachers and to improve the physical science education of K-12 teachers. Currently there are 26 PTEC institutions. The organization of the Coalition is a part of a larger NSF funded project called PhysTEC.

PhysTEC, the project, is an effort to develop and disseminate a model for improving the quality and quantity of physics and physical science k-12 teachers. At its heart, the project seeks to raise, in the minds of physics faculty, the importance of the role of physics departments in educating future teachers. The American Physical Society, American Association of Physics Teachers, and American Institute of Physics lead the project. Participating institutions have physics and education faculty working together to provide an education for future teachers that emphasizes interactive engagement and a student-centered, PER-based approach to learning physics. Our web site, www.phystec.org, provides details of the project, its goals, and outcomes.

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