WORKSHOP

Experts in physics education research share knowledge at international event

Experts in physics education research speak at the event in Puebla.

The city of Puebla is overlooked by the volcano Popocatepetl.

Every year during the last weekend in May the concentration of physics teachers at the Faculty of Physical and Mathematical Sciences, Benemerita Universidad Autonoma de Puebla, Puebla, Mexico, increases sharply. The reason for this is that Puebla hosts the international workshop New Trends in Physics Teaching. The event is now in its 12th year.

Each year the workshop attracts about 80 high-school and university physics teachers from all over Latin America. The main objectives of the event are to promote the application of physics education research results in the design and implementation of physics courses, and to create opportunities for an exchange of experiences between physics teachers.

About 10 lecturers, selected from recognized experts in the field of physics education research and well-known physics teachers, are invited to speak at the event. This year, the list included Manuel Fernández González (University of Granada, Spain), Andy Johnson (Black Hills State University, USA), Harol Hoffman and Gerald W Meisner (University of North Carolina, USA), Gorazd Planinšič (University of Ljubljana, Slovenia), David E Meltzer (Iowa State University, USA), Adrián Corona Cruz (Autonomous University of Puebla, Mexico), Dewey I Dykstra (Boise State University, USA), Salvador Jara Guerrero (University of San Nicolas, Mexico) and Josip Slisko (Autonomous University of Puebla).

Discussion points

The different aspects of the use of technology in physics learning was one of the topics for discussion. Andy Johnson spoke about how adequate computer software can help students to better develop their conceptual models.

Hoffman and Meisner showed how it is possible to build a virtual lab based on constructivist pedagogy. Meltzer gave an overview of the status of physics education research in the US and presented strategies and trends in achieving active learning in large classes. Slisko pointed out the persistence and propagation of misinterpreted physics concepts in textbooks. Planinšič discussed a number of original experiments and demonstrated how to use them to achieve active learning.

After a Saturday night poster session in which delegates shared their teaching ideas, there was a party. Moved by Mexican snacks and songs, many lecturers and teachers revealed their musical and dancing talents. The greatest star was Meltzer who is able to sing – with an incredible accent – more than 100 national anthems!

Gorazd Planinšič and
Josip Slisko