Using Technology to Teach Physics

Monday, Jan 26, 2004 3:30 - 5:00 PM

a) Eric Mazur (Harvard)

Technology should not be a new way of presenting old things. The Interactive Learning Toolkit (ILT) is a web-based learning management system. Students are given a pre-class reading assignment. Each student is required to send an email detailing to either one concept that he/she found difficult, or one concept that he/she found interesting. Student questions are responded to, sometimes through email, and sometimes during the class. The PRS system gives each student a remote control which may be used to indicate answers to questions asked during class. Students may also use their PDAs to answer questions. A staff/student forum is available on the Web for discussions. This software is open-source, and available in the public domain at http://www.deas.harvard.edu/galileo/login/.

b) Wolfgang Christian, Davidson College

Computer-rich pedagogy for teaching Special and General Relativity is available open source at http://www.opensourcephysics.org/.

c) Gregor M. Novak, U.S. Air Force Academy

Just in Time Teaching (JITT) increases interaction between the instructor and the students. Research has shown that students often do not learn what we want them to, despite passing the course. They tend to cope rather than learn. JITT also improves transfer of learning using graduated prompting. More information is available at http://webphysics.iupui.edu/jitt/jitt.html.