



## **Professor Wolfgang Christian** *Davidson College, USA*

Wolfgang Christian is the Brown Professor of Physics at Davidson College where he has taught since 1983 and is a fellow of the American Physical Society. He received his B.S. and Ph.D. in Physics from North Carolina State University at Raleigh. He is the author or co-author of nine books including: *Open Source Physics: A User's Guide with Examples* (Addison Wesley 2006), *An Introduction to Computer Simulation Methods : Applications to Physical System* (Addison Wesley 2006), *Physlet Quantum Physics* (Prentice Hall 2005), *Physlet Physics* (Prentice Hall 2004), *Physlets: Teaching Physics with Interactive Curricular Material* (Prentice Hall, 2001), *Just-in-Time Teaching* (Prentice Hall, 1999), and *Waves and Optics*: Volume 9 of the Computational Physics Upper Level Software, CUPS, series (Wiley, 1995). He has been books editor of the APS journal *Computers in Physics*. He is past chair of the American Physical Society Forum on Education. He was the chair of the first APS Excellence in Physics Education Award Selection Committee and was the co-chair of the 2008 Gordon Research Conference on Physics Research and Education. Currently he is working on multi-media physics curricular development using the World Wide Web and on Java-based open source program development.

### **Plenary Lecture:**

### **Building a National Digital Library for Computational Physics Education at All Levels**

Over the past dozen years we have produced some of the most widely used interactive computer-based curricular materials for the teaching of introductory and advanced physics courses. These materials are now hosted on and distributed from the Open Source Physics (OSP) Collection of the ComPADRE National Science Digital Library. This talk outlines the tripartite integration of ComPADRE with the Easy Java Simulations modeling and authoring tool and the OSP code library. The pedagogical and technical features of this learning platform and our current efforts to align this material with United States national and state standards for science teaching are described. The Open Source Physics Collection is available on the: <http://www.compadre.org/osp/>

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