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

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RW James Building, Lecture Theatre B
12h00-13h00

Over the past dozen years the WebPhysics and Open Source Physics (OSP) projects have produced some of the most widely used computer-based curricular materials for the teaching of introductory and advanced physics courses. These materials are based on Java applets called Physlets and on new OSP programs and authoring tools. These materials are hosted on and distributed from the OSP Collection of the ComPADRE National Science Digital Library. This talk outlines the integration of ComPADRE with our curricular material. The pedagogical and technical features of our 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 at: <http://www.compadre.org/osp/>

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BIOGRAPHICAL SKETCH

Dr. 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. Dr. Christian 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). His work is being distributed through the ComPADRE National Science Digital Library and this work has received a SPORE Prize (Science Prize for Online Resources in Education) from the American Association for the Advancement of Science.

Dr. Christian is currently serving as the national Secretary of the American Association of Physics Teachers and as President of the North Carolina Section of this Association.