

1023-Z1-373

**Ignatios E Vakalis\*** ([ivakalis@csc.calpoly.edu](mailto:ivakalis@csc.calpoly.edu)), Department of Computer Science, California Polytechnic and State University, San Luis Obispo, CA 93407. *Curricula Models for Undergraduate Computational Science Education.*

In many areas of science and engineering, computation has become an equal partner along with theory and experimentation. Numerical simulations enable the study of complex systems that are too expensive, too dangerous or even impossible to study by direct experimentation. Computational Science and Engineering (CSE) is a rapidly growing multidisciplinary area with connections to the sciences, engineering, mathematics and computing. It focuses on the development of problem solving methodologies and robust tools for the solution of scientific/ engineering problems. CSE is playing an important role and is projected to dominate the future of scientific discovery process.

During the last few years the number of CSE programs at the Undergraduate level is slowly increasing. In the talk, we will present an outline of the various models of CSE curricula. The information is part of the upcoming SIAM report on "Undergraduate Computational Science Education" (to be released in late Fall 2006; the presenter serves as a co-author of the national report).

The talk will also provide specifics of a model CSE curriculum and present information related to depositories for educational web-based materials developed by the Keck Undergraduate Computational Science Education Consortium. (Received September 10, 2006)