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Visions for Quantitative Biology Lecture Series

Identifying Challenges of Scientific Computing**Philipp Schwaha, Technische Universität Wien**

Institute for Microelectronics

Johnston Hall 338
March 18, 2008 - 03:00 pm**Abstract:**

The high competitiveness of the semiconductor industry results in high and complex requirements for its branch of scientific computing, Technology Computer Aided Design (TCAD). Efficient progress can only be maintained when all of these issues are addressed in a coordinated fashion. Our investigations indicate that a combination of modern programming paradigms and available methodologies is required to maintain the rate of progress in simulation research. Using Boltzmann's equation as an example a number of methods are presented and a few implementation using our Generic Scientific Simulation Environment (GSSE) are presented.

Speaker's Bio:

Philipp Schwaha was born in Vienna, Austria, in 1977. He studied electrical engineering at the Technische Universität Wien where he received the degree of Diplomingenieur in 2004. He joined the Institute for Microelectronics in June 2004, where he is currently working on his doctoral degree. His research activities include circuit and device simulation, device modeling, and software development.

