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Special Guest Lectures

Introduction to the Numerical Non-linear Medium**Jennifer Tate, Center for Computation & Technology**

Postdoctoral Researcher

Johnston Hall 338

October 09, 2007 - 02:00 pm

Abstract:

Jennifer will discuss the idea of the "numerical non-linear medium" for modeling short pulse laser experiments. There will be an overview of the physics involved, followed by an introduction of her intended project as a new postdoctoral researcher in the Materials World focus area. This project involves the merging and parallelization of two existing large-scale single-processor codes in order to allow for a state of the art description of the highly non-linear interaction between a short pulse laser and an atomic medium.

Speaker's Bio:

Jennifer received her B.S. in physics and math from the University of Wisconsin-Madison in 1998. She then attended graduate school at The Ohio State University, focusing on the subject of nonlinear optics and receiving her Ph.D. in experimental physics in 2004. Her first postdoctoral research position was also completed at Ohio State, working in the area of strong field laser physics. During this first postdoc she began the transition from experimental to computational physics, and her work now involves numerical modeling of the laser-matter interaction. Her current project as a postdoctoral researcher at the CCT is to further develop a "numerical non-linear medium", allowing for the complete simulation of the most advanced short pulse laser experiments from first principles.

