Search

CENTER FOR COMPUTATION & TECHNOLOGY
Interdisciplinary | Innovative | Inventive

LOUISIANA STATE UNIVERSITY

Events

Current Events
Lectures ▼
Events Archive ▼

Special Guest Lectures

Recent development in nonconforming methods for Maxwell equations

Dr. Fengyan Li, Assistant Professor, Rensselaer Polytechnic Institute

Department of Mathematical Sciences

Johnston Hall 338
February 19, 2007 - 11:00 am

Abstract:
In this talk, I will discuss some recent developments in computational electromagnetism. Two schemes are formulated for the reduced time-harmonic Maxwell equations. One is using the classical nonconforming finite elements, the other is based on the interior penalty type discontinuous Galerkin methods. The operators in these schemes naturally define two Maxwell eigensolvers which are spurious free. Theoretical and numerical results will be presented to demonstrate the performance of these methods. This is joint work with Susanne Brenner and Li-yeng Sung (LSU).

Speaker's Bio:
Fengyan Li is currently an assistant professor in the Department of Mathematical Sciences at Rensselaer Polytechnic Institute. Li received her B.S and M.S. in computational Mathematics from Peking University in 1997 and 2000, her Ph.D. in Applied Mathematics from Brown University in 2004, then she spent two years as a postdoctoral Fellow at University of South Carolina. Li's main research interests are in numerical analysis and scientific computing. Her recent research includes the development of the local structure-preserving discontinuous Galerkin (DG) methods and some nonconforming finite element methods for Maxwell source problems, Maxwell eigenproblems, MHD equations, and Hamilton-Jacobi equations etc. She is also working on the DG-based fast sweeping methods for solving static Hamilton-Jacobi equations.

LSU

Center for Computation & Technology
2003 Digital Media Center • Telephone: +1 225/578-5890 • Fax: +1 225/578-8957