STEVENS Institute of Technology

Arthur E. Imperatore School of Sciences and Arts

Department of Mathematical Sciences

Seminar in Nonlinear Systems

Yi Li

Department of Mathematical Sciences
Stevens Institute of Technology

Well-posedness of a nonlinearly dispersive system

Thursday, March 20, 2003
3:30 pm
Morton 101

Abstract: We investigate nonlinear dispersive evolution equations as models to approximate the fully nonlinear water wave problem. Our studies consist of two aspects; numerical simulations and the mathematical analysis for these equations to justify the validity of these physical models and to compare them with weakly nonlinear models of the full water wave problem. In this talk we shall show local well-posedness of a nonlinearly dispersive system and the comparison of its numerical solutions with those of the full water wave problem.

Professor Li's research interests are in the area of nonlinear evolution equations (partial differential equations), especially the mathematical analysis and numerical simulation of traveling wave solutions, and their application to fluid mechanics.

Professor Li received her Ph.D.in Mathematics from Penn State University. Prior to joining Stevens in the Fall of 1999, Professor Li held positions at the University of Minnesota and Los Alamos National Laboratory.

Refreshments at 3:15pm