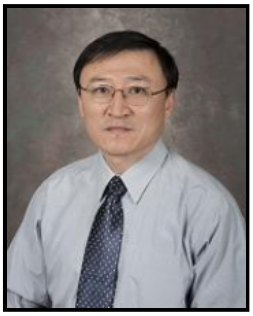

Special Guest Lectures

TVD Solver in Coastal Models

Fengyan Shi, University of Delaware

Assistant Professor

Johnston Hall 338
September 12, 2011 - 03:00 pm

Abstract:
Total Variation Diminishing (TVD) solver is used in several coastal models, including a Boussinesq wave model, a 3D non-hydrostatic wave model, and a coupled wave-current model. The models implemented with the shock-capturing TVD scheme show robust performances in modeling breaking waves, nearshore circulation and coastal inundation. In this talk, I will present a multi-order MUSCLE-TVD scheme and a high-order adaptive time-stepping scheme in the recent developments of those coastal models. Model applications to large-scale wave simulation, tsunami generation and propagation, and coastal inundation will also be presented.

Speaker's Bio:
Dr. Shi's research interests include numerical modeling, nearshore processes, coastal ocean hydrodynamics and sediment transport, and tsunamis. He received his Ph.D. from the Ocean University of Qingdao, China.

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