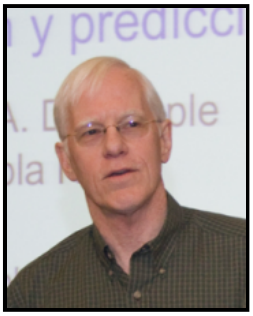

CCT Distinguished Lecture

Modeling Free Surface Flows with GPUSPH, a GPU-accelerated SPH Code

Robert A. Dalrymple, Johns Hopkins University

Willard & Lillian Hackerman Professor, Civil Engineering

Johnston Hall 338
January 12, 2012 - 03:00 pm

Abstract:
Smoothed Particle Hydrodynamics (SPH) is a meshfree numerical method, which was developed for astrophysics, but is well-suited for free surface flows such as dam breaks and water waves. The basis of the model and its application to free surface flows will be presented, leading to the development of the open source code, SPHysics. The advent of GPU computing resulted in a GPU-accelerated version of SPH: GPUSPH. Some applications of SPH to examples such as breaking waves and splash-up, floating bodies, and to mean wave-induced flows such as rip currents will be shown.

Speaker's Bio:
Dr. Robert Anthony Dalrymple has been the Willard & Lillian Hackerman Professor of Civil Engineering at Johns Hopkins University since 2002. Prior to that time he was the E.C. Davis Professor of Civil Engineering and founder of the Center for Applied Coastal Research at the University of Delaware, where he taught for 29 years. His research is in the field of coastal engineering, including water waves and and natural hazards, such as rip currents and tsunamis. He is a Distinguished Member of the ASCE, and a member of the National Academy of Engineering.

Refreshments will be served.
This lecture has a reception.

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