Ship hydrodynamics is a discipline that has been practiced for thousands of years but only truly understood for about 100 years. The ability to predict ship resistance and was more art than science until the late 1800’s when the principals of fluid mechanics were properly applied. The key is to account for the different components of drag that affect a moving ship.

Fast moving ships create large breaking waves at their bows. These waves contribute not only to resistance but also detectability because of the splash, underwater noise and resulting bubbly wake. The mechanics of breaking bow waves have been studied experimentally using a unique 2D+T wave maker which simulates ship waves without the need for a hull model. A parametric series of wave maker motions are tested to relate fundamental components of bow shape with resulting wave characteristics. The nature of the test set up allow for previously unattainable measurements of wave geometry.

Dr. Eric Maxeiner is postdoctoral researcher in the Department of Civil Engineering at Johns Hopkins University. His major research areas include breaking wave mechanics and environmental fluid mechanics. Dr. Maxeiner received his PhD at the University of Maryland in 2009 and previously worked as a naval architect for the Navy for 6 years.

Monday, October 5, 2009
JHU Homewood Campus
Computational Science and Engineering Building (CSEB)
Room B17
12:00 – 12:45 pm

Seminar is FREE. For parking please see link for visitors at www.jhu.edu and select information on Homewood Campus.
One Professional Development Hour (PDH) will be awarded to attendees.