## **UCRUSTERSITY** OF CALIFORNIA **Department** of Mathematics

The Department of Mathematics at the University of California, Riverside is proud to present the



Víctor L. Shapíro Dístínguíshed Lecture ín Mathematícs



Gíven by





of Brown University.

Steady Water Waves

I will consider classical 2D traveling water waves with vorticity. By means of local and global bifurcation theory using topological degree, we now know that there exist many such waves. They are exact smooth solutions of the Euler equations with the physical boundary conditions. The waves may be quite tall. There are periodic ones and solitary ones. I will also exhibit some numerical computations of such waves. Many fundamental problems remain open.

Wednesday, October 15<sup>th</sup>, 2014 Tea tíme ís 3:40 p.m. The talk begíns 4:10 p.m. ín Surge 284