

Pathways Lecture Series in Mathematics, KEIO

Speaker : Prof. David Lannes
(Université Bordeaux I)

Place : 12-209, 2nd Floor, Building 12
Faculty of Science and Technology
Yagami Campus, Keio University

Lecture 1 10:00~12:00, 14:00~16:00, March 22, 2007

Lecture 2 10:00~12:00, 14:00~16:00, March 24, 2007

Lecture 3 10:00~12:00, 14:00~16:00, March 26, 2007

Mathematical tools and asymptotics for water-waves

The aim of these lectures is to introduce the mathematical tools necessary to the analysis of the water-waves equation and the derivation and justification of asymptotic models in various physical regimes.

Organization:

Part I: Physical background

Part II: Pseudo-differential operators

Part III: Hyperbolic systems

Part IV: A simple Nash-Moser theorem

Part V: The Dirichlet-Neumann operator

Part VI: Derivation of the main physical models

Part VII: Main steps of the well posedness theory for the water-waves equations