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DK Seminar

January 14, 2015, 14:00 - 15:30
University of Vienna,
Faculty of Mathematics, OMP 1, HS 2

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Models for Shallow Water Waves

My talk consists of three parts. The first part briefly introduces the governing equations for water waves: the equation of motion and the equation of mass conservation, together with the dynamic and the kinematic boundary condition. The corresponding non-dimensional system contains two parameters: the shallowness parameter and the amplitude parameter. By making assumptions on their size, this system leads to simpler asymptotic models. The second part deals with the derivation of such model equations. Finally I will discuss the local well-posedness of a particular model equation.