

**Thomas ALAZARD**

**Control and stabilization of the incompressible Euler equation with free surface**

The incompressible Euler equation with free surface dictates the dynamics of the interface separating the air from a perfect incompressible fluid. This talk is about the controllability and the stabilization of this equation.

The goal is to understand the generation and the absorption of water waves in a wave tank. These two problems are studied by two different methods: microlocal analysis for the controllability, and study of global quantities for the stabilization (multiplier method, Pohozaev identity, hamiltonian formulation, Luke's variational principle, conservation laws...).