

The vortex-wave system with a finite number of vortices as the limit of the Euler- α equations

Eleonora Pinto de Moura, Helena J. N. Lopes, Milton C. L. Filho

Universidade Federal do Rio de Janeiro

In this talk I will discuss solutions of the two-dimensional Euler- α equations when the initial vorticity is the superposition of a finite number of point vortices and a bounded background vorticity. Finally I will show that these solutions converge, as $\alpha \rightarrow 0$, to a weak solution of the vortex-wave system, introduced by Marchioro and Pulvirenti (1991).