DELORT Jean-Marc

Almost global solutions for the capillarity wave equation with small periodic data.

We prove that the capillarity waves equation in one dimension and finite depth has solutions over time intervals of length $c_N\epsion^{-N}$ for any N, if the Cauchy data are of small size ϵ and space periodic, and if the gravity, or the surface tension, is taken outside a subset of zero measure. The proof relies on normal forms and on the use of the reversibility of the equation. This is joint work with Massimiliano Berti.