Karlsruhe Institute of Technology

Mini-Workshop “Analysis of PDEs”
March 27th - March 31st, 2023

14:00 - 15:00 pm, Thursday, March 30th 2023
Seminar room: SR 1.067, Math Building 20.30

On resonance chains in the Boussinesq equations

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Abstract

The 2D Boussinesq equations describe the evolution of a heat conducting viscous or inviscid fluid. We show that for perturbations of stable thermal stratification and shear flow, nonlinear resonances can be described as the interaction of wave-like solutions already in a linear model. Moreover chains of resonances give rise to norm inflation, which strongly depends on the frequency regimes under consideration.