

CMM PDE Seminar

Speaker: Christopher Maulen de la University of Bielefeld

Title: On the Asymptotic Stability of Solitary Wave Solutions to the Boussinesq Model in the Energy Space.

Abstract: The Good Boussinesq (GB) model is known to admit solitary wave solutions with speeds in the range $-1 < c < 1$. In this talk, we revisit existing results and present new findings on the asymptotic stability of solitary wave solutions to the GB equation with power-type nonlinearity and general initial data in the energy space $H^1 \times L^2$.

These new result complete the orbital stability stability result established by Bona and Sachs (1988). The proof employs a novel set of virial estimates specifically tailored to the GB system in a moving frame. In particular, we introduce a mixed-variable virial estimate that effectively addresses arbitrary scaling and shift modulations. This is joint work with Claudio Muñoz.

Venue: DIM seminar room, Beauchef 851, 5th floor.

Monday, January 13th at 12:15 pm.

For further information, see our webpage: <https://eventos.cmm.uchile.cl/pdeseminar/>

