

Abstract

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Violation of bulk-edge correspondence in a hydrodynamic model

Joint with H. Jud and C. Tauber

Shallow water models are known to exhibit topological properties in presence of Coriolis forces. Such models can be considered from a bulk perspective, and thus in terms of waves on an unbounded expanse of water, or from an edge perspective, in terms of waves coming to shore or propagating along it. Some form of bulk-edge correspondence would be expected, if not taken for granted. It however turns out that the correspondence is anomalous, as found by Tauber et al. or, by considering more boundary conditions, simply violated. The reasons are linked to Levinson's theorem from scattering theory.