

Abstract Submitted
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Observation of broad-band water waveguiding in shallow water: a revival¹ CLAUDIO FALCON, FABIN SEPLVEDA, DIEGO GUZMN-SILVA, EDGARDO ROSAS, RODRIGO VICENCIO, Univ de Chile — We report on the observation and characterization of broad-band waveguiding of surface gravity waves in an open channel, in the shallow water limit. The waveguide is constructed by changing locally the depth of the fluid layer, which creates conditions for surface waves to propagate along the generated guide. We present experimental and numerical results of this shallow water waveguiding, which can be straightforwardly matched to the one-dimensional water wave equation of shallow water waves. Our work revitalizes water waveguiding research as a relevant and controllable experimental setup to study complex phenomena using waveguide geometries.

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