İTÜ | MATEMATİK BÖLÜMÜ

The Inverse Problem for Periodic Travelling Waves of the Linear 1D Shallow-Water Equations

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The motion of small-amplitude waves of a water layer with variable depth along the x-axis is described by the classical equations of the shallow water theory. For the linear 1D shallow-water system with a variable bathymetry, we study the inverse problem of the existence of a periodic bottom profile that allows a periodic travelling wave with prescribed amplitude q(x).

This is a joint work with R. Hakl recently published in Physica D.

***Tarih*: 07 Mayıs 2025 Çarşamba**

***Saat*: 14:30-15:30**

***Yer*: Fen-Edebiyat Fakültesi B1-326**

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