Boğaziçi
MATH GRAD SEMINAR

Spectral Stability of Periodic Waves in the Generalized KdV Equation

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Abstract: In this talk, we will study the spectral stability of small-amplitude periodic traveling waves in the generalized Korteweg–de Vries (gKdV) equation. We will introduce the associated linearized operator and use Floquet–Bloch theory to relate its spectrum to a family of periodic eigenvalue problems. We will then discuss how perturbation methods can be used to analyze the resulting spectra. Finally, we will state the main spectral stability result, highlighting its dependence on the nonlinearity exponent p.

Date : Wednesday, November 25, 2026
Time: 15:00
Place: TB130