

Meeting on Computational and Analytic Problems in Spectral Theory

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Abstract of Talk

STABILITY CRITERIA FOR PERIODIC WAVES IN HAMILTONIAN SYSTEMS

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We present three general stability/instability criteria for periodic travelling waves in Hamiltonian or reversible systems. The criteria rely upon spectral properties of the linear operators found by linearising the system at a given periodic wave. We apply these results to different model equations arising in the classical water-wave problem. The focus is on the questions of transverse and modulational linear stability/instability.