

# Meeting on Computational and Analytic Problems in Spectral Theory

Cardiff School of Computer Science & Informatics, June 6<sup>th</sup>-9<sup>th</sup> 2016

## Abstract of Talk

---

### STABILITY CRITERIA FOR PERIODIC WAVES IN HAMILTONIAN SYSTEMS

Mariana Haragus

Laboratoire de Mathématiques, UFR des Sciences et Techniques, Université de Franche-Comté,  
16 route de Gray, 25030 Besançon cedex, France

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.