

Meeting on Computational and Analytic Problems in Spectral Theory

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Abstract of Talk

SCATTERING FOR HAMILTONIAN SYSTEMS

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I will describe how the so called Conservative Camassa-Holm system, of importance to the theory of water waves, leads to a scattering/inverse scattering problem for a 2×2 Hamiltonian system.

I will then sketch a general scattering theory for such systems, which also involves a spectral transform we call the Jost transform. Finally, I will indicate the proof of a uniqueness theorem for inverse scattering for equations of this type, which is also a uniqueness theorem for inverse spectral theory.

This is joint work with Malcolm Brown in Cardiff and Rudi Weikard in Birmingham, AL.