ESI Erwin Schrödinger International Institute for Mathematical Physics

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Seminar

Prof. Antonio Degasperis

University of Rome "La Sapienza"

Integrable nonlinear equations, nonlocal interaction and spectral methods

Friday, June 1, 2012

at 15:00 h

ESI, Erwin Schrödinger Lecture Hall

Abstract: A general class of integrable nonlinear multi-component wave equations are discussed to show that integrability, as implied by Lax pair, does not necessarily imply solvability of the initial value problem by spectral methods. A simple instance of this class, with applicative relevance to nonlinear optics, is discussed as a prototype model. Conservation laws and special solutions of this model are displayed to emphasize the integrability issue.

J. Yngvason

May 23, 2012