



Colloquio De Giorgi PATRICK GÉRARD

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ore 15:00

Elaborazione a cura del Servizio Comunicazione e Relazioni Esterne | SNS

*Integrability versus wave turbulence
for Hamiltonian partial differential equations*

Abstract

In the world of Hamiltonian partial differential equations, complete integrability and wave turbulence are often considered as opposite paradigms. The purpose of this talk is first to give a rough idea of these different notions. Then will be discussed the example of the cubic Szegő equation, a nonlinear wave toy model which surprisingly displays both properties. The key is a Lax pair structure involving Hankel operators from classical analysis, and is connected to a surprisingly explicit inverse spectral method.

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