

WORKING GROUPS PDE

DATE: MONDAY, OCTOBER 3, STARTING FROM 15:00 ¹

Convergence of numerical schemes for the 1-d stochastic wave equation

QI LU

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We will present a resume of the paper by J.B. Walsh, “On numerical solutions of the stochastic wave equation”, Illinois J. Math., 50(1-4)(2006), 991-1018,

In this work, the convergence of order $h^{1/2}$ in any L^p -norm of a fully discrete finite difference scheme for the stochastic 1-d wave equation is proved. The scheme is constructed on an uniform grid with equal time and space steps. Due to the $1/2$ -Holder regularity of the continuous solution of the wave equation the convergence rate is optimal.

DATE: MONDAY, OCTOBER 3, NOT BEFORE 15:30

Analysis of the Fit of Different Stock Assessment Models to the Northern Megrin Population (*Lepirdohombus whiffiagonis*)

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In order to ensure the survival of the species, and, at the same time, optimize the economical profit, it is important to know as much as possible about the state of the species population. Since the population size is not directly observable, we have to deal with an inverse problem in which the observation is made through the catch that different fleets report. These report contain information that is very noisy and that is often biased. We introduce three iterative models to determine the size of a population, that will be used to determine the Northern megrim population evolution since 1984 until 2010, and the quality of the results will be discussed.”

¹The presentation will last about 30 minutes + further questions and discussions