

WORKING GROUPS PDE

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An introductory talk about the paper titled "Analytic Regularity and Generalized Polynomial Chaos Approximation of Parametric and Random 2nd Order Hyperbolic Partial Differential Equations" by Viet Ha Hoang and Christoph Schwab.

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In that paper, the authors study the initial boundary value problems of linear second order hyperbolic partial differential equations whose coefficients depend on countably many random parameters. They first show analyticity of weak solutions with respect to these parameters. Then they study the Galerkin approximation of the solution of the equation. The present results can be used to obtain convergence rates and stability of sparse space-time tensor product Galerkin discretizations in the parameter space.

In the talk, I will introduce the main results and the main idea for the proof.