

# Applied Mathematics Seminar

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**“Random mixed hyperbolic models:  
Numerical analysis and computing”**

Thursday, July 30, 2009

2 p.m.

487 Pickard Hall

Abstract:

This talk deals with the construction of reliable numerical solutions of mixed problems for hyperbolic second order partial differential models with random information in the variable coefficients of the differential equation and in the initial data. Using random difference schemes, a random discrete eigenfunctions method is developed in order to construct a discrete approximating stochastic process. Mean square consistency of the random difference scheme is treated and mean square stability of the numerical solution is studied. Statistical moments of the numerical solution are also computed. The obtained results will be illustrated with several examples.

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<http://www.uta.edu/math/pages/main/seminar.htm>*