

THE UNIVERSITY



OF HONG KONG

Department of Mathematics

Numerical Mathematics and Applied Analysis Group Seminar (NMAA)

Stochastic variational inequalities and their applications in engineering mechanics

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on Tuesday, March 4, 2014 at 3:00pm
in Room 309, Run Run Shaw Building, HKU

Abstract

Stochastic variational inequalities (SVI) are useful to model nonlinear phenomena with memory such as permanent (also called plastic) deformations of a certain type a mechanical structure under random forcing. A major advantage of SVIs is to allow us to work in a markovian framework for problems originally formulated with memory. In this presentation, I will show two cycle properties of a SVI arising in random mechanics and a relevant engineering application to the risk analysis of failure of a simple mechanical structure.

All are welcome
