

Simulation of random fields on Riemannian manifolds

Annika Lang
(Chalmers)

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Abstract

Random fields are important building blocks in spatial models disturbed by randomness such as solutions to stochastic partial differential equations. The fast simulation of random fields is therefore crucial for efficient algorithms in uncertainty quantification. In this talk I present numerical methods for Gaussian random fields on Riemannian manifolds and discuss their convergence. Simulations illustrate the theoretical findings.



TU Berlin
Institut für Mathematik
Straße des 17. Juni 136
10623 Berlin
MA 041