Seminar/Talk

Brownian motions on spaces of probability measures

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A diffusion process is constructed on the L2-Wasserstein space over a closed Riemannian manifold. The process, which may be regarded as a candidate for the Brownian motion on such space, is associated with the Dirichlet form induced by the L2-Wasserstein gradient and by the DirichletFerguson random measure with intensity the Riemannian volume measure on the base manifold. We discuss the closability of the form via an integration-by-parts formula, which allows explicit computations for the generator and a specification of the process via a measure-valued SPDE. We comment how the construction is related to previous work of von RenesseSturm on the Wasserstein Diffusion and of Konarovskyivon Renesse on the Modified Massive Arratia Flow.

Thursday, October 31, 2019 04:00pm - 06:00pm
Heinzel Seminar Room / Office Bldg West (I21.EG.101)

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