



Mathematics and CS Seminar

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 Dirichlet-Ferguson 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 Renesse-Sturm on the Wasserstein Diffusion and of Konarovskiy-von 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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