

Institute for Applied Mathematics, Bonn University

Oberseminar Stochastik

Thursday, 20 April 2017, 16:30

Lipschitz-Saal (LWK 1.016)

Christian Léonard

Université Paris Ouest

Some results about entropic transport

Optimal transport is a powerful tool for proving several functional inequalities such as: concentration inequalities, geometric inequalities (Prekopa-Leindler inequality) or entropy-entropy production inequalities related to rates of convergence to equilibrium of heat flows. In this talk, an alternate similar approach will be introduced. It relies on entropic transport rather than standard optimal transport. The optimal transport problem is replaced by the Schrödinger problem: an entropy minimization problem on the set of probability measures with marginal constraints. The large deviation principle leading to the Schrödinger problem will be introduced and some easy proofs of functional inequalities, based on this entropy minimization problem, will be sketched.