

# Existence and stability results of Fokker-Planck equations and Markov processes associated to log-concave measures

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## **Abstract**

In this talk, based on a joint work with L. Zambotti and G. Savaré, I will describe some applications of the variational theory of Fokker-Planck equations in the Wasserstein space of probability measures, first introduced by Jordan, Kinderlehrer and Otto. Developing some ideas contained in the book with Gigli and Savaré, we show that the Wasserstein formulation is sufficiently robust to allow for singular drift terms, and even infinite-dimensional state spaces. As a byproduct, general existence and stability results can be obtained for the Fokker-Planck equations and for the associated Markov processes.