Institute for Applied Mathematics, Bonn University

Oberseminar Stochastik

Thursday, 25 November 2021, 16:30
Lipschitz-Saal (LWK 1.016)

Giuseppe Genovese

University of Zurich

Change of variables of Gaussian integrals under Hamiltonian flows

I will present some recent developments on the study of the transformation properties of Gaussian measures under the flow of certain Hamiltonian PDEs, achieved in collaboration with R. Lucà and N. Tzvetkov. The focus of the seminar will be on the so-called BBM equation (after Benjamin-Bona-Mahony), whose technical simplicity will facilitate the exposition, but the approach is valid also in other more complicated contexts. I will show how a non-zero amount of dispersion allows us to establish a change of variable formula for the transported measure, in the spirit of the classical results of Cameron-Martin, Girsanov and Ramer.