

Bo Wu (Bonn)

Functional inequalities on general loop spaces

Abstract

This talk is based on a joint work with Xin Chen and Xue-Mei Li. In this talk we discuss the heat kernel of a complete and stochastically complete Riemannian manifold, and obtain a local asymptotic estimate for the gradient of its logarithm and a local integration by parts formula on loop space over a manifold. Using these we establish a Log-Sobolev inequality with a potential term and a local Log-Sobolev inequality.