

Regularity and stability of invariant measures for diffusion processes under synthetic lower Ricci curvature bounds

KOHEI SUZUKI

Abstract. The Sobolev regularity of invariant measures for diffusion processes is proved on non-smooth metric measure spaces with synthetic lower Ricci curvature bounds. As an application, the symmetrizability of semigroups is characterized, and the stability of invariant measures is proved under perturbations of drifts and the underlying spaces in the sense of the measured Gromov convergence.

Mathematics Subject Classification (2020): 53C23 (primary); 35J15 (secondary).