

Smooth dependence of the solution of the backward Kolmogorov equation on the potential

Xue-Mei Li (University of Warwick, Coventry, England)

Abstract. We study the backward Kolmogorov equation with a zero order term b which is not assumed to be locally bounded. We prove that the solution varies ‘smoothly’ with respect to the shift of the potential by a continuous path. This allows us to prove a regularizing property of integrating a Brownian functional in time.