A VARIATIONAL REPRESENTATION FOR POSITIVE FUNCTIONALS OF INFINITE DIMENSIONAL BROWNIAN MOTION

Amarjit Budhiraja
Paul Dupuis

Abstract: A variational representation for positive functionals of a Hilbert space valued Wiener process \((W(\cdot))\) is proved. This representation is then used to prove a large deviations principle for the family \(\{G^\varepsilon(W(\cdot))\}_{\varepsilon>0}\), where \(G^\varepsilon\) is an appropriate family of measurable maps from the Wiener space to some Polish space.

1991 AMS Mathematics Subject Classification: Primary: -; Secondary: -;

Key words and phrases: Large deviations, Laplace principle, stochastic control, cylindrical Brownian motion, stochastic evolution equations, infinite dimensional stochastic calculus.

THE FULL TEXT IS AVAILABLE HERE