1048-60-379 **Tai Melcher*** (melcher@virginia.edu), University of Virginia, Department of Mathematics, Charlottesville, VA 22903. *Heat kernel analysis for semi-infinite Lie groups.*

I'll talk about heat kernel measure on a class of infinite dimensional Lie groups based on an abstract Wiener space. Heat kernel measure here will be defined as the law of a Brownian motion, constructed as the solution to a stochastic differential equation. We'll discuss results for the heat kernel measure, including a Cameron-Martin type quasi-invariance theorem and a logarithmic Sobolev inequality, as well as some potential applications. (Received February 10, 2009)