1136-60-91 **Leila setayeshgar***, 1 Cunningham Square, Providence, RI 02918, and **Mohammud Foondun**.

Large Deviations for a Class of Stochastic Semilinear Partial Differential Equations.

Standard approaches to large deviations analysis for stochastic partial differential equations (SPDEs) are often based on approximations. These approximations are mostly technical and often onerous to carry out. In 2008, Budhiraja, Dupuis and Maroulas, employed the weak convergence approach and showed that these approximations can be avoided for many infinite dimensional models. Large deviations analysis for such systems instead relied on demonstrating existence, uniqueness and tightness properties of certain perturbations of the original process. In this talk, we use the weak convergence approach, and establish the large deviation principle for the law of the solutions to a class of semilinear SPDEs. Our family of semilinear SPDEs contains, as special cases, both the stochastic Burgers' equation, and the stochastic reaction-diffusion equation. (Received January 04, 2018)