1096-35-2728 **Aynur Bulut*** (abulut@ias.edu), Department of Mathematics, University of Michigan, Ann Arbor, MI. *Gibbs measure evolution and probabilistic global well-posedness for radial nonlinear Schrödinger and wave equations on the unit ball.*

We discuss recent works, joint with Jean Bourgain, in which we establish new global well-posedness results along Gibbs measure evolutions for the radial nonlinear wave and Schrödinger equations posed on the unit ball in R^N. We consider initial data consisting of Gaussian random processes lying in the support of the associated Gibbs measures, and results are obtained almost surely with respect to these probability measures. Our techniques are based on an analysis of convergence properties of solutions to sequences of finite-dimensional projections of the equations. Key tools include a class of probabilistic a priori bounds, estimates of fine frequency interactions for solutions of the projected equations, and use of invariance properties of the Gibbs measure which allow to extend our bounds to arbitrary long times. (Received September 18, 2013)