1081-60-48 **Tadahiro (Choonghong) Oh***, Department of Mathematics, Fine Hall, Washington Rd, Princeton, NJ 08544-1000, and **Jeremy Quastel** and **Benedek Valko**. *Interpolation of Gibbs measures with white Noise for Hamiltonian PDEs.*

We consider a family of interpolation measures between Gibbs measures, corresponding to certain Hamiltonian PDEs (KdV, mKdV, and cubic NLS), and the white noise on the circle. We show that they converge weakly to the white noise. In particular, this implies (i) invariance of the white noise for KdV and (ii) the white noise is a weak limit of invariant measures for mKdV and cubic NLS. The proof is based on multilinear analysis of functions with random Fourier coefficients.

This is a joint work with Jeremy Quastel (Univ. of Toronto) and Benedek Valko (Univ. of Wisconsin Madison.) (Received January 17, 2012)