

## **Theme 2: dispersive**

### **Invariant measures for mKdV and KdV on the line**

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I will discuss a recent result on the invariance of the Gibbs measure on the line for the real-valued defocusing modified Korteweg de-Vries equation (mKdV). This involves building a global-in-time flow for mKdV with initial data that grows at infinity, which is a major difficulty in this work. Furthermore, by applying the Miura transform, we also discover a new invariant probability measure for KdV on the line, with the same local regularity as the white noise but which is non-Gaussian.

This talk is based on joint work with R. Killip and M. Visan (UCLA).