

## SEMINAIRE D'ANALYSE

➤ **VENDREDI 20 OCTOBRE 2017 à 14:15 - SALLE MA A3 31**

Prof. Nicolas **BURQ** (Université Paris-Sud, Orsay - FR) donnera un séminaire sur le thème :

**« QUASI-INVARIANT MEASURES, AND ALMOST SURE SCATTERING FOR THE ONE  
DIMENSIONAL SCHRÖDINGER EQUATION ON THE LINE  $\mathbb{R}$  »**

Abstract:

We consider the one-dimensional nonlinear Schrödinger equation with a nonlinearity of degree  $1 < p < +\infty$ . On  $\mathbb{R}$ , due to dispersion effects, there cannot exist any (non trivial) invariant measure for the linear flow. We define measures on the space of initial data which are supported below  $L^2$  and for which we can describe quite precisely the evolution under the non linear flow in terms of the linear evolution (which is explicit). We deduce from this description that the non linear equation is almost surely globally well posed and scatters for  $p > 3$  with nice description of the scattering operator (Identity + compact-smoothing). This is work in progress with L. Thomann and N. Tzvetkov.

Lausanne, le 9 octobre, 2017

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Les séminaires qui ont lieu à la Section de Mathématiques sont annoncés sur Internet  
<http://memento.epfl.ch/math/>