

**Marcel Guardia**

Title: Growth of Sobolev norms for the cubic defocusing nonlinear Schroedinger equation in polynomial time

Abstract: We consider the cubic defocusing nonlinear Schrödinger equation in the two dimensional torus. Fix  $s > 1$ . Colliander, Keel, Staffilani, Tao and Takaoka (2010) proved existence of solutions with  $s$ -Sobolev norm growing in time by any predetermined factor  $R$ . Refining their methods in several aspects we find solutions with  $s$ -Sobolev norm growing in polynomial time in  $R$ . This is a joint work with V. Kaloshin.