概率论系列报告 Probability Seminar

报告题目(Title): Multi-bubble Bourgain-Wang solutions to L2-critical nonlinear Schrödinger equations

报告人(Speaker): 张登 (Shanghai Jiao Tong University)

时间(Time): **2021/12/06 14:00-15:00**

地点(Venue): Tencent meeting(616 899 196)

摘要(Abstract):

Abstract: In this talk, we are concerned with a general class of focusing mass-critical nonlinear Schrödinger equations with lower order perturbations, for which the pseudo- conformal symmetry and the conservation law of energy can be absent. Two canonical examples are the deterministic nonlinear Schrödinger equations (NLS) and the stochastic nonlinear Schrödinger equation driven by the linear multiplicative noise. In dimensions one and two, we construct Bourgain-Wang type solutions, concentrating at finitely many distinct singularities, and prove that they are unique if the asymptotical behavior is within the order $(T-t)^{4+}$, for t close to the blow-up time T. This provides examples for the mass quantization conjecture. In particular, through the pseudo-conformal transform, this also provides examples of non-pure multi-solitons (with dispersive term) to L2-critical NLS. The talk is based on the work in joint with Michael Röckner and Yiming Su.

欢迎参加

Everyone is welcome.