1163-35-306 **Mouhamadou Sy** and **Xueying Yu***, 77 Massachusetts Ave, Cambridge, MA. *Almost sure global well-posedness for the energy supercritical NLS on the unit ball of $\mathbb{R}^3$.*

In this talk, we present two almost sure global well-posedness (GWP) results for the energy supercritical nonlinear Schrödinger equations (NLS) on the unit ball of $\mathbb{R}^3$ using two different approaches. First, for the NLS with algebraic nonlinearities with the subcritical initial data, we show the almost sure global well-posedness and the invariance of the underlying measures, and establish controls on the growth of Sobolev norms of the solutions. This global result is based on a deterministic local theory and a probabilistic globalization. Second, for the NLS with generic power nonlinearities with critical and supercritical initial conditions, we prove the almost sure global well-posedness, and the invariance of the measure under the solution flows. This global result is built on a compactness argument and the Skorokhod representation theorem. (Received September 01, 2020)