

1167-81-328

Ramis Movassagh and **Jeffrey Schenker*** (schenke6@msu.edu). *Theory of Ergodic Quantum Processes.*

The generic behavior of quantum systems has long been of theoretical and practical interest. Any quantum process is represented by a sequence of quantum channels. In this talk, general ergodic sequences of stochastic channels will be considered and a general ergodic theorem which shows that the composition of such a sequence of channels converges exponentially fast to a rank-one (replacement) channel will be presented. Applications of this formalism to describe the thermodynamic limit of ergodic Matrix Product States will also be presented. (Received March 09, 2021)