— Friday : D. Bernard

<u>Title</u>: Playing with free probability in noisy many-body systems

<u>Abstract</u>: We will illustrate the emergence and the role of free probability in the quantum symmetric simple exclusion process, a pragmatic model of noisy many-body system out-of-equilibrium. This will give us the opportunity to explore some of the structures underlying free probability, and, if time permits, explain how those can be used to derive new results about the spectrum of sub-blocks of random matrices with application to entanglement properties in the quantum symmetric simple exclusion process.