SPEAKER:

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TITLE:

Introduction to Stationary and Ergodic Quantum Processes

ABSTRACT:
A discrete time parameter quantum process is represented by a sequence of quantum operations, which are completely positive maps that are trace non-increasing. In this talk we study the case where the sequence describing the quantum process is stationary and ergodic. Under irreducibility conditions, ergodic theorems describing convergence to equilibrium for such processes were recently obtained by Movassagh and Schenker. In the continuous time parameter, a quantum process is represented by a double-indexed family of positive map valued random variables. For a stationary and ergodic family of such maps, we extend the results by Movassagh and Schenker to the continuous case.