UNIVERSITY OF HOUSTON DEPARTMENT OF MATHEMATICS

Analysis Seminar

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Quantum Markov semigroups and Complete logarithmic Sobolev inequality

1:00 pm in 646 PGH November 1, 2019

Abstract

Quantum Markov semigroups models the time evolution of dissipative open quantum systems. As for classical Markov semigroup, logarithmic Sobolev inequalities in the quantum setting are powerful tools to deriving concentration properties and mixing time estimates. In this talk, I will talk about a "complete bounded" version of log-Sobolev inequality. This complete log-Sobolev inequality is stable under tensor product, and leads to concentration inequality and mixing time estimates independent of dimensions of environment system. Based on joint works with Marius Junge and Nicholas LaRacuente.