



Analysis Seminar

Title: Non-Local Games and Operator Algebras

Speaker: Priyanga Ganesan (University of California San Diego)

Date: Tue 26th March 2024 at 3:00PM

Location: Online

Abstract: In recent years, nonlocal games have received significant attention in operator algebras and resulted in highly fruitful interactions, including the recent resolution of the Connes Embedding Problem. A nonlocal game involves two non-communicating players who cooperatively play to win against a referee. In this talk, I will provide an introduction to the theory of non-local games and quantum correlation classes. We will discuss the role of C^* -algebras and operator systems in the study of their perfect strategies. It will be shown that mathematical structures arising from entanglement-assisted strategies for nonlocal games can be naturally interpreted and studied using tools from operator algebras. I will then present a general framework of non local games involving quantum inputs and quantum outputs and use them to discuss an isometry game for quantum metric spaces.

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