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Average Mixing Matrix of Continuous Quantum Walks

The average mixing matrix is used to study the long-term average behavior of a continuous quantum walk on a graph. In this talk we will study the average mixing matrices of some important families of graphs including strongly regular graphs and hypercubes. We will also find out which of these matrices can be written as a linear combination of identity and all-ones matrices. This work is a product of the PIMS First Year Interest Groups (FYIG), joint with Joy Cooper, Hermie Monterde, Alireza Talebpour, and Ruth Wang.