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Eigenvalue distributions of iterated comb products of graphs and a new independence

Abstract

Accardi, Ben Ghorbal and Obata discovered an application of monotone independence to comb products (or rooted products) of graphs, and investigated the vacuum distribution of the adjacency matrix. In turn, this talk will focus on the eigenvalue distributions. For this we will introduce a new independence depending on two linear functionals. A similar analysis is done for star products of graphs and we also introduce the corresponding independence. This is a joint work with Octavio Arizmendi and Franz Lehner.