



Analysis Seminar

Title: Spectral arbitrariness for trees fails spectacularly

Speaker: R. Levene

Date: Tue 4th April 2023 at 3:00PM

Location: Seminar Room SCN 1.25

Abstract: Given a graph G , consider the spectra of the real symmetric matrices which realize G , in the sense that the pattern of their non-zero off-diagonal entries corresponds to the edges of G . We identify a family of graphs and multiplicity lists whose realizable spectra are highly restricted. In particular, we find trees with multiplicity lists that require a unique spectrum, up to shifting and scaling, representing the most extreme possible failure of spectral arbitrariness.

This is joint work with Shaun Fallat, Tracy Hall, Seth Meyer, Shahla Nasserar, Polona Oblak and Helena Šmigoc.

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