Operators Grow on Trees

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Abstract

This talk features a marriage between Functional Analysis and Graph Theory; the Tree-Shift. Every rooted tree gives rise to a Hilbert space and an associated Tree-Shift. For a functional analyst, it can be thought of a generalization of the classical shift, while for a graph theorist, it is akin to an adjacency matrix. Regardless of background, this accessible talk aims to answer the question, What can a Tree-Shift tell us about the tree?