

Trace Formulae and Tri-diagonal Matrices

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Some applications of trace formulae to the spectral analysis of tri-diagonal matrices will be described. In particular, the speaker's recent joint work with Barry Simon (math-ph/0112008). A major result of this work was the determination of the set of spectral measures that arise from Hilbert–Schmidt perturbations of the free Jacobi matrix. That is, the Jacobi matrix with ones on the sub/super-diagonals and zeros elsewhere.