

## THE SPECTRAL TYPE OF SUMS OF OPERATORS

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Two commuting normal can be simultaneously diagonalized and so it is easy to seem that their sum must also be normal. Once one leaves the Hilbert space setting, there are many possible generalizations of being normal or self-adjoint. Some of these involve spectral decompositions and some involve functional calculus properties. Just which of these properties are preserved under the taking of sums is a classical problem which has been studied for 50 years or more. In this talk we shall discuss some of the history and also some of the very recent progress in this area. If time permits we shall discuss an application of these results to some noncommutative analogues of standard theorems from harmonic analysis.

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