PIMS Distinguished Lecture Series

Kenneth R. Davidson

University of Waterloo

Friday,
October 19, 2018
3:30 - 4:30 p.m.
Research and
Innovation Centre 208

Multivariable Operator Theory

The study of a single operator on Hilbert space was revolutionized by Sz.Nagy in 1953 when he showed that every linear operator of norm at most one was the “corner” of an isometry. These latter operators are well understood, and have been widely studied. His monograph with Foias a decade later led to important new methods for the study of single operators. In the late '60s, Arveson presented a non-commutative dilation theory that vastly generalized Sz.Nagy's work. However its application to multivariable operator theory was hampered by the lack of a good analogue of the single variable theory. In recent times, important models (that play the role of the isometry in Sz.Nagy's theory) have emerged in both the commutative and non-commutative context that allow the use of a wide variety of techniques. I will survey some of the history and recent progress.

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