

Kenneth Davidson
University of Waterloo

The functional calculus for commuting row contractions

Abstract

A commuting row contraction is a d -tuple of commuting operators T_1, \dots, T_d such that $\sum_{i=1}^d T_i T_i^* \leq I$. Such operators have a polynomial functional calculus which extends to a norm closed algebra of multipliers \mathcal{A}_d on Drury-Arveson space. We characterize those row contractions which admit an extension of this map to a weak-* continuous functional calculus on the full multiplier algebra. In particular, we show that completely non-unitary row contractions are always absolutely continuous, in direct parallel with the case of a single contraction. This is based on the detailed structure of the dual space of \mathcal{A}_d . Finally, we consider refinements of this question for row contractions that are annihilated by a given ideal.

This is joint work with Raphaël Clouâtre.

Talk time: 07/22/2016 9:40AM— 07/22/2016 10:30AM

Talk location: Brown Hall 100