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Non-Commutative Functions on the Non-Commutative Ball

Abstract

In this talk we will discuss nc-functions on the unit nc-ball \mathfrak{B}_d . The focus of the talk will be the algebra $H^\infty(\mathfrak{B}_d)$ of multipliers of the nc-RKHS on the unit ball obtained from the non-commutative Szego kernel. We will give a new proof for the fact that the non-commutative Szego kernel is completely Pick. Then we will consider subvarieties of \mathfrak{B}_d and quotients of $H^\infty(\mathfrak{B}_d)$ arising as multipliers on those varieties. We are interested in determining when the multiplier algebras of two varieties are completely isometrically isomorphic. It is natural to conjecture that two such algebras are completely isometrically isomorphic if and only if there is an automorphism of the nc ball that maps one variety onto the other. We present several partial results in this direction.

Talk time: 07/21/2016 5:30PM— 07/21/2016 5:50PM

Talk location: Crow 206

Special Session: Non-commutative inequalities. Organized by J.W. Helton and I. Klep.