Holomorphic functions on the symmetrized bidisk - realization, interpolation and extension

Abstract

There are three new things in this talk about the open symmetrized bidisk \( \mathbb{G} = \{(z_1 + z_2, z_1z_2) : |z_1|, |z_2| < 1\} \).

1. The Realization Theorem: A realization formula is demonstrated for every \( f \) in the norm unit ball of \( H^\infty(\mathbb{G}) \).

2. The Interpolation Theorem: Nevanlinna-Pick interpolation theorem is proved for data from the symmetrized bidisk and a specific formula is obtained for the interpolating function.

3. The Extension Theorem: A characterization is obtained of those subsets \( V \) of the open symmetrized bidisk \( \mathbb{G} \) that have the property that every function \( f \) holomorphic in a neighbourhood of \( V \) and bounded on \( V \) has an \( H^\infty \)-norm preserving extension to the whole of \( \mathbb{G} \).

Talk time: 07/19/2016 5:30PM— 07/19/2016 5:50PM
Talk location: Cupples I Room 113

Special Session: State space methods in operator and function theory. Organized by J. Ball and S. ter Horst.