

Caixing Gu
California Polytechnic State University

Toral m -isometric tuples of commuting operators on a Hilbert space

Abstract

We initiate the study of toral m -isometric tuples of commuting operators on a Hilbert space. This class of operator naturally generalize the m -isometry of a single operator in Agler and Stankus's work. The word "toral" is in contrast to the "spherical" m -isometric tuple of several commuting operators studied in by Gleason and Richter. We derive some basic reproducing formulas and give some alternative characterizations for this class of operators. Spectral and decomposition properties are obtained. In particular, we construct numerous examples of toral m -isometric tuples by using sums of operators, product of operators, functions of operators. Concrete examples of tuples of weighted shifts and multiplication operators on holomorphic spaces of several variables are displayed.

Talk time: 2016-07-19 04:00 PM— 2016-07-19 04:20 PM
Talk location: Cupples I Room 207