

TEMPLE UNIVERSITY MATHEMATICS COLLOQUIUM

Hugo Woerdeman

Drexel University

will speak on

Multivariable moment problems

ABSTRACT: The moment problem asks when a list of complex numbers may be represented as the moments of a positive measure. Its applications are numerous and include linear prediction and digital filtering. Methods used to solve them range from completions of positive semidefinite matrices, orthogonal polynomials, study of structured matrices, Schur/reflection parameter techniques, to commutant lifting theorems, reproducing kernel Hilbert spaces, and an algebraic scheme called the band method. A particular active area of current research are the multivariable moment problems. In this lecture we shall focus our attention on both the multivariable trigonometric moment problem and the multivariable Hamburger moment problem. The former solves a long standing bivariate autoregressive filter problem.

MONDAY, APRIL 25, 2011

LECTURE AT 4:00 PM

COFFEE, TEA, AND REFRESHMENTS FROM 3:30 PM

ROOM 617, WACHMAN BUILDING

DEPARTMENT OF MATHEMATICS