

Title: Complex Variables and Infinite  
Dimensional Linear Systems

Abstract: Complex function algebras play a fundamental role in the analysis and synthesis of linear infinite dimensional systems. In this talk we present concrete applications of complex variable methods to such problems as: stabilization, parametrization of stable controllers, spectral factorization, controller design. The mathematical topics discussed include: Corona theorems,  $\bar{\partial}$  theory, algebraic functions,  $H^\infty$  theory.