1125-30-1248          **Catherine Beneteau\*** (`cbenetea@usf.edu`). *Optimal polynomial approximants in Dirichlet spaces.*

In this talk, I will discuss the problem of finding, for a given function f in a Dirichlet-type space, the polynomial p that is optimal in the sense that pf is the best approximation of 1 in norm, among all polynomials of degree at most n. I will examine how these optimal polynomials are related to classical objects of complex analysis such as weighted reproducing kernels and orthogonal polynomials and discuss related current open problems. This talk is based on a series of papers that have appeared over the last few years, with various co-authors, including Alberto Condori, Dmitry Khavinson, Conni Liaw, Daniel Seco, Brian Simanek, and Alan Sola. (Received September 15, 2016)