COMPLEX ANALYSIS SEMINAR

A BROWN-HALMOS TYPE THEOREM FOR WEIGHTED BERGMAN SPACE TOEPLITZ OPERATORS

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ABSTRACT: We denote the weighted Bergman space on the unit disc $\mathbb{D}$ in the complex plane by A^2_α and the Toeplitz operator on A^2_α with bounded symbol φ by by T_φ. Let f, g be bounded harmonic functions on $\mathbb{D}$ and assume that h is a bounded smooth enough function on $\mathbb{D}$. For α any positive integer we will show that $T_f T_g = T_h$ if and only if f is co-analytic or g is analytic and in either case $h = fg$. This result is similar to what Patrick Ahern and Željko Čučković showed in their famous paper in 2001 for unweighted case.

Date: Thursday, April 26, 2012

Time: 4pm-5pm

Place: FH 1900

Webpage: `http://math.utoledo.edu/~sonmez/complexseminar.html`