

# COMPLEX ANALYSIS SEMINAR

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## DIAGONAL TOEPLITZ OPERATORS IN SEVERAL COMPLEX VARIABLES

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**ABSTRACT:** Recall that the Bergman space  $A^2(\mathbb{B}_n)$  is the space of all square integrable holomorphic functions on the unit ball in  $\mathbb{C}^n$  ( $n \geq 1$ ). It is well known that  $A^2(\mathbb{B}_n)$  admits an orthonormal basis consisting of multiples of holomorphic monomials. I will discuss the following problems:

- (a) Describe all bounded functions  $f$  for which the Toeplitz operator  $T_f$  is diagonal with respect to the above orthonormal basis?
  - (b) Given a non-constant function  $f$  satisfying the conditions in (a), describe all bounded functions  $g$  such that  $T_g$  commutes with  $T_f$ .
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**Date:** Thursday, September 30, 2010

**Time:** 4pm-5pm

**Place:** UH 3800

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**Webpage:** <http://math.utoledo.edu/~sonmez/complexseminar.html>