

# COMPLEX ANALYSIS SEMINAR

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## COMPACTNESS OF PRODUCTS OF HANKEL OPERATORS ON THE POLYDISK

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**ABSTRACT:** Let  $\mathbb{D}^n$  be the polydisk in  $\mathbb{C}^n$  and symbols  $\phi, \psi \in C(\overline{\mathbb{D}^n})$  such that  $\phi$  and  $\psi$  are pluriharmonic on any  $(n - 1)$ -dimensional polydisk in the boundary of  $\mathbb{D}^n$ . Then  $H_\psi^* H_\phi$  is compact on  $A^2(\mathbb{D}^n)$  if and only if for every  $1 \leq j, k \leq n$  such that  $j \neq k$  and any  $(n - 1)$ -dimensional polydisk  $D$ , orthogonal to the  $z_j$ -axis in the boundary of  $\mathbb{D}^n$ , either  $\phi$  or  $\psi$  is holomorphic in  $z_k$  on  $D$ . I will present a part of the paper "Compactness of products of Hankel operators on the polydisk and some product domains" written by two professors Željko Čučković and Sönmez Şahutoğlu.

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**Date:** Thursday, March 03, 2011

**Time:** 4pm-5pm

**Place:** UH 4440

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