

MATHEMATICS COLLOQUIUM  
DREXEL UNIVERSITY

**Extensions of Positive Definite Functions on Groups**

**Mihaly Bakonyi**

Department of Mathematics and Statistics  
Georgia State University

**Abstract**

In the first part of the talk I will present an extension of Krein's theorem, stating that every positive definite operator-valued function on a symmetric interval of an ordered Abelian group can be extended to a positive definite function on the entire group. In the second part, I will show that every positive definite operator-valued function on words of length  $j \leq m$  of the free group with  $n$  generators can be extended to a positive definite function on the whole group. Several related results will also be presented, including factorization of positive polynomials in noncommutative variables.

Tuesday, May 3, 2005, 3:30 - 4:30pm, Korman 247  
(coffee/tea at 3:15)

Faculty *and* students are invited to attend