The Mathematics and Statistics Club at Georgia State University presents…

Intrinsic Products and Complementary Basic Matrices

A talk by Dr. Frank Hall

$$\begin{bmatrix} a_{1,1} & a_{1,2} & a_{1,3} & \dots & a_{1,n} \\ a_{2,1} & a_{2,2} & a_{2,3} & \dots & a_{2,n} \\ \dots & \dots & \dots & \dots & \dots \\ a_{m,1} & a_{m,2} & a_{m,3} & \dots & a_{m,n} \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \\ x_3 \\ \dots \\ x_n \end{bmatrix} = \begin{bmatrix} b_1 \\ b_2 \\ \dots \\ b_m \end{bmatrix}$$

The product of a row and column vector is *intrinsic* if there is at most one non-zero product of corresponding coordinates. Analogously, we speak about intrinsic products of two or more matrices, as well as about *intrinsic factorization* of matrices.

This talk will discuss intrinsic products and inheritance properties of *complementary basic* matrices. Some basics of *sign pattern* matrices will be presented, and inheritance properties for these sign patterns will be considered.

Some of this work resulted from Fulbright research. Dr. Hall's Fulbright experience will be discussed and some pictures of the Czech Republic will be shown.

12.00pm, January 24th 2011

College of Education 796

Free Pizza and Drinks!!!