Monday, April 7, 2008

Root Hall A186, ISU

12:00 p.m., noon

Professor Frank J. Hall

Georgia State University

Some Connections between Boolean and Nonnegative Sign Pattern Matrices

A nonnegative sign pattern matrix is a matrix whose entries come from the set $\{+, 0\}$. Such a matrix can also be viewed as a Boolean matrix, by replacing each $+$ entry with 1.
In this talk, some interesting connections between nonnegative sign pattern matrices and Boolean matrices are investigated. In particular, the relations between the minimum rank, the Boolean row (or column) rank, the Schein rank, and nonnegative minimum rank factorizations are explored.
This is some joint work with Bhaskara Rao Kopparty and Jason Li.