



THE UNIVERSITY OF  
**CHICAGO**

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Majorization: A Partial Order That Has Lots of Applications

MONDAY, November 17, 2014 at 4:00 PM  
Eckhart 133, 5734 S. University Avenue  
*Refreshments following the seminar in Eckhart 110*

ABSTRACT

Majorization is a partial order that seems to arise naturally in many quite different contexts. In chemistry the concept of majorization is called mixing and in physics it is referred to as chaotic (one vector is more chaotic than another). In some fields it is said that one vector is more random than another, and in economics this order is used in the context of stochastic dominance. In graph theory it is referred to as a pinch. We describe several origins of majorization, and provide a diverse set of examples from probability, statistics, combinatorics and graphs, numerical analysis and matrix theory. Special emphasis will be on the Lorenz curve which is central to comparisons of measures of inequality in society.