



THE UNIVERSITY OF  
**CHICAGO**

Department of Statistics  
**FIRST YEAR PHD MINI SEMINARS**

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**Fast Convergence of Natural Bargaining Dynamics in  
Exchange Networks**

**FRIDAY, May 24, 2013 at 4:00 PM**  
110 Eckhart Hall, 5734 S. University Avenue

**ABSTRACT**

Bargaining networks model the behavior of a set of players who need to reach pair-wise agreements for making profits. Nash bargaining solutions in this context correspond to solutions which are stable and balanced. Kleinberg and Tardos proved that, if such solutions exist, then they can be calculated in polynomial time. But their described algorithm requires global information which is generally not available to players and hence not practicable in real life scenarios. In their paper of the same title, Yashodhan Kanoria et al. showed that it is actually possible to design a natural algorithm that only involves local information on players' parts and at the same time converge rapidly to NB solutions. This talk will mainly focus on a brief description of their algorithm accompanied by a outline of the proof.

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