

Courant Institute of Mathematical Sciences
Mathematics Colloquium

Date: Monday, Nov 2, 2009

Speaker: Ron Peled (Courant Institute)

Title: Fair Allocations to Random Points

Abstract:

Given an infinite collection of points in space, how do we allocate the same area to each point in a decentralized, shift-invariant way? Such allocations have been the subject of many investigations in recent years and different approaches to the problem have used such tools as: the Gale-Shapley stable marriage algorithm, the Riemann mapping theorem and Newtonian gravity. I will survey results in the field, with special focus on the Gradient Flow Allocation, a natural allocation rule suggested by Sodin and Tsirelson, and its variant - the Gravitational Allocation. My own contribution to the subject is joint with Sourav Chatterjee, Yuval Peres and Dan Romik.