

Stanford University
Departments of Mathematics and Statistics

PROBABILITY SEMINAR

*** Note Special Time ***

5pm, Monday, February 1, 2016
Sequoia Hall Room 200

Cookies served at 4:30pm, 1st floor Lounge.

Speaker: Dan Romik, *UC Davis*

Title: **A Pfaffian point process for Totally Symmetric
Self Complementary Plane Partitions**

Abstract:

Totally Symmetric Self Complementary Plane Partitions (TSSCPPs) can be encoded as a family of nonintersecting lattice paths having fixed initial points and variable endpoints. The endpoints of the paths associated with a uniformly random TSSCPP of given order therefore induce a random point process, which turns out to be a Pfaffian point process. I will discuss conjectural formulas for the entries of the correlation kernel of this process, and a more general “rationality phenomenon”, which if true implies the existence of an interesting limiting process describing “infinite TSSCPPs” as well as conjectural probabilities for the occurrence of certain connectivity patterns in loop percolation (a.k.a. the dense $O(1)$ loop model).