Temple University Mathematics Colloquium

Mihai Ciucu

Georgia tech

will speak on

A random tiling model for two-dimensional electrostatics

We consider random lozenge tilings with a finite number of triangular holes. We define the correlation of such holes by including them in large lattice regions and considering an appropriate normalization of the number of tilings of the complement of the holes. We show that in the scaling limit the correlation is obtained from a multiplicative superposition principle that parallels two dimensional electrostatics. Our results apply for any finite collection of lattice triangular holes of even side. We also indicate how a lattice refinement parameter accounts for physical temperature.

Monday, May 2, 2005
Lecture at 4:00 PM (♯)
Coffee and refreshments from 3 - 5 PM.
Room 617, Wachman Building
Department of Mathematics