



Colloquium

Wednesday October 25, 2006

1pm Room 08-2130

**“STOCHASTIC SPATIAL PROCESSES:
COMPETITION MODELS”**

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Stochastic spatial processes and interacting particle systems are mathematical models for large systems made up of "components" which interact in some way. Among the phenomena these systems model are competition of species, epidemics, spread of genetic traits, and catalytic chemical reactions. I will give a brief introduction to this field via two examples, the "voter model" and a stochastic Lotka-Volterra model. Basic questions for these models concern survival and coexistence. I will present a few known results and give a glimpse of some of the techniques used in the analysis of these systems. There are many open problems that are easy to describe (but difficult to answer).

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School of Mathematical Sciences Colloquium Series