

Topics in Probability: Large Scale Stochastic Dynamics
Math 588-1 Spring 2012

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This course discusses topics in the large scale behaviors of stochastic interacting particle systems. Recent ‘classics’ will be covered, but also open problems will be mentioned.

Tentative schedule:

- Hydrodynamic limits
- Construction of some particle systems; invariant measures
- Tracer particle motion
- Fluctuations; KPZ limits

Roughly, we will try to cover each in $\frac{1}{4}$ of the time, however, depending on interests, we may spend more time on some of the topics.

There is no text for the course. However, supplementary material may be found at appropriate times on the website.