



Center for Soft Matter and Biological Physics

Discussion Meeting

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“Critical Phenomena in Presence of Symmetric Absorbing States”

Friday, October 18, 2019

4:00pm - 5:00pm

304 Robeson Hall

Phase transitions in non-equilibrium systems have been the subject of many studies in the area of statistical physics. In this talk, I will discuss standard steady-state and time-dependent quantities for models which exhibit a voter-like phase transition, a symmetry-breaking phase transition in absence of bulk noise, and an absorbing phase transition belonging to the Directed Percolation universality class. The Langevin description of systems with two symmetric absorbing states will be introduced and the resulting phase diagram with three different phases (disordered and active, ordered and active, absorbing) separated by critical lines belonging to three different universality classes (generalized voter, Ising, and directed percolation) will be discussed. I also present a proposed microscopic model with two symmetric absorbing states that possesses all the features of the Langevin description.

