

THE DYNAMICS OF NUCLEATION

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The Cahn-Hilliard equation is one of the fundamental models to describe phase separation dynamics in metal alloys. In this talk, I will focus on applying traditional dynamical tools, such as bifurcation theory and computational topology in order to gain a better understanding of the droplet formation during nucleation for the stochastic Cahn-Hilliard equation. I will consider different types of noise and different types of boundary conditions.