

## Abstract

In this talk, I will mainly consider stochastic Cahn-Hilliard equations with some singularities. I will first explain some ergodic properties on one-dimensional stochastic Cahn-Hilliard equations with reflecting walls. Then I will discuss recent progress on two-dimensional stochastic Cahn-Hilliard equation on the whole space  $\mathbb{R}^2$ , which is a singular Stochastic PDEs and also known as conservative dynamic  $\Phi^4_2$ . This talk is based on joint works with L. Goudenège, T. Funaki, H. Zeng and Q. Zhang.