

## On statistical inference for some nonlinear Stochastic PDEs

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### Abstract

We consider a parameter estimation problem to determine the drift coefficient for a large class of parabolic Stochastic PDEs driven by additive or multiplicative noise. In the first part of the talk, we derive several different classes of estimators based on the first  $N$  Fourier modes of a sample path observed continuously on a finite time interval. Second part of the talk will be devoted to estimating the viscosity parameter for the Stochastic Burgers equations with a fractional order dissipation of the form  $\nu(-\Delta)^\beta$ , driven either by additive or multiplicative noise. We study the consistency and asymptotic normality of these estimators as number of Fourier coefficients increases, and we present some numerical simulation results.