

## Igor Cialenco

### Parameter estimation problem for discretely sampled SPDEs

We will discuss the problem of estimating the drift and volatility of linear parabolic SPDEs when the solution is sampled at discrete points in time and/or space. We will start with some general results on derivation of consistent and asymptotically normal estimators based on computation of the p-variations of stochastic processes and their smooth perturbations, that consequently are conveniently applied to SPDEs. Both the drift and the volatility coefficients are estimated using two sampling schemes - observing the solution at a fixed time and on a discrete spatial grid, and at a fixed space point and at discrete time instances of a finite interval. The theoretical results will be illustrated via numerical examples.