Alois Pichler: From random fields to RKHS: kernel regression in RKHS norm.

The RKHS estimator allows reconstructing a function from data observed with noise. In the talk, we derive this well-known estimator from Gaussian random fields. We then investigate the estimator for general distributions with homo- and heteroscedastic noise. We provide explicit relations for convergence of the empirical sample average approximation in norm and in mean, for which conservative convergence rates are made available.