

# Estimation with infinite dimensional kernel exponential families

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I will discuss infinite dimensional exponential families given by reproducing kernel Hilbert spaces, focusing estimation of the functional parameter with the score matching method. Some results of asymptotic theory are shown on the convergence of parameters for large sample size in both of the well-specified case, where the true density is in the model, and the miss-specified case, where the true density is not within the model but in a slightly larger function space. I will also show some practical applications of the model including parameter estimation with intractable likelihood.