

Stein kernels, optimal transport and the central limit theorem

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Abstract. Stein kernels are a way of comparing a given probability measure with the standard Gaussian measure, introduced by Stein as a way of obtaining rates of convergence in the central limit theorem. In this talk, I will discuss some properties of those kernels, an existence result and recent work on a connection with the theory of optimal transport. As a consequence, we obtain various quantitative versions of the central limit theorem. Partly based on joint work with Thomas Courtade and Ashwin Pananjady.