NEAL MADRAS, York University, Department of Mathematics and Statistics, 4700 Keele Street, Toronto, ON, M3J 1P3
Wasserstein and Total Variation Convergence Rates of Markov Chains

When studying the rate of convergence of an ergodic Markov chain to its equilibrium distribution, the usual metric of "convergence" is total variation; however, for continuous state spaces, it is sometimes easier to work with the (typically weaker) Wasserstein metric. We show how one can convert bounds on Wasserstein convergence rates into bounds on total variation convergence rates (under certain checkable assumptions). We illustrate using two examples:

(a) a two-parameter Gaussian Bayesian estimation problem, and

(b) the random logistic model studied by Steinsaltz (Ann. Probab., 1999).

This is joint work with Deniz Sezer (Calgary).