

# GEOMETRIC AND STOCHASTIC ANALYSIS ON THE WASSERSTEIN SPACE

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The Wasserstein optimal transportation distance is associated to an infinite dimensional Riemannian structure on the space of probability measures, as famously observed by Otto around 2000. Departing from his gradient flow interpretation of certain evolution equations we will give various other applications and constructions based on this geometry, such as Ricci curvature and Boltzmann Entropy, Wasserstein Diffusion and finally modeling of quantum fluids.