
BRENDAN PASS, University of Alberta

Wasserstein barycenters over Riemannian manifolds

I will describe joint work with Y.-H. Kim (UBC). We study barycenters in the space of probability measures on a Riemannian manifold M , equipped with the Wasserstein metric. Under reasonable conditions, we prove absolute continuity of the barycenter (which is itself a measure on M). As applications, we prove Jensen type inequalities for various displacement convex functionals, as well as a Riemannian version of Vitale's random Brunn-Minkowski inequality.