

Wasserstein regression

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We consider in this talk the inverse problem behind Wasserstein barycenters. Given a family of measures several algorithms have been recently proposed to compute efficiently the Wasserstein barycenter of that family under a given weight vector. I will describe an algorithmic solution to tackling the corresponding inverse problem: how to estimate, given an input measure, the measure in the set of all Wasserstein barycenters of the original family of measures that is the closest, under some distance, to the input measure. I will present applications in graphics and brain imaging.

This is joint work with Nicolas Bonneel and Gabriel Peyré.

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