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## Claire Brecheteau - Approximating data with a union of ellipsoids and clustering.

*Thursday, October 13, 2022 2:30 PM (1 hour)*

I will introduce a surrogate for the distance function to the support of a distribution, whose sublevel sets are unions of balls or of ellipsoids. I will expose different results, including rates of convergence for the approximation of these surrogates with their empirical versions, built from pointclouds. I will explain how to use such estimators to cluster data with a geometric structure. The results have been published in the papers [1,2], and are still in progress.