

Geometry and distributions of shapes

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There are several notions of the “shape” of a configuration of k points in an Euclidean space of dimension $p = 2$ ($k > p$). In general, a space M of such shapes is a space of orbits under a group of transformations, which form a differentiable manifold, often with a natural Riemannian structure. Issues of uniqueness of the Fréchet mean of a distribution Q on such a manifold, and of the distribution of the sample Fréchet mean are of significance in many applications in biology, medicine and machine vision. We consider these problems in the context of the geometry of the manifold, and provide a number of examples and applications.

This is based on joint work with Vic Patrangenaru and Abhishek Bhattacharya. The work is partially supported by an NSF grant DMS 0406143.

List of invited speakers

Schedule for December 12