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Abstract for an Invited Paper
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Generalization of distance to higher dimensional objects, and its application to protein folding[1]

STEVEN PLOTKIN, University of British Columbia

After a brief biophysical introduction to motivate the problem, I will show how the notion and calculation of distance between two objects can be generalized to the case where the objects are no longer points, but are one-dimensional. Additional concepts such as nonextensibility, curvature constraints, and noncrossing become central to the notion of distance. I will give some analytical and numerical results for specific examples, and I will discuss applications to biopolymers and protein folding.

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