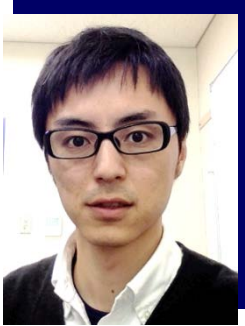# Geometry-Aware Metric Learning for Histograms

13：30 – 13：50 Introduction
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13：50 – 14：30
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6 / 1 13：30 – 14：30
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Many applications in machine learning handle histograms rather than simple vectors. Defining a proper geometry to compare histograms can be crucial for many machine learning algorithms. Empirical evidence shows that Euclidean metric may not be the best choice when dealing with data in the simplex. Additionally, it might be desirable to choose a metric adaptively based on data. We first proposed to learn a metric for histograms by generalizing a family of Aitchison embeddings (1982) using labeled histograms. We proposed next to learn a Riemannian metric on the simplex using only unlabelled histograms.