1163-68-261 **James M Murphy*** (`jm.murphy@tufts.edu`). *Data-Dependent Distances for Hyperspectral Images.*

Approaches to unsupervised clustering and semisupervised learning with data-dependent distances are proposed. By considering metrics derived from data-driven graphs, robustness to noise, class geometry, and dimensionality is achieved. The proposed algorithms enjoy theoretical guarantees on flexible data models, and also have quasilinear computational complexity in the number of data points. Applications to remotely-sensed hyperspectral images are emphasized. Portions of this work are joint with Anna Little (Utah), Mauro Maggioni (Johns Hopkins), and Shukun Zhang (Tufts). (Received August 31, 2020)