



Hyperspectral Unmixing with Spatial Dependence

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Motivated by the increasing availability of high-dimensional laboratory-generated spectral libraries, this paper introduces a library-based statistical model to unmix hyperspectral images. The model accounts for spatial correlation between the pixels via a latent Markov random field such that pixels with the same latent group label share the same mixture of pure end-members.

Keywords: Hyperspectral Unmixing; Empirical Bayes; Markov Random Fields; Monte Carlo EM.