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Some Applications of Nonnegative Tensor Factorizations to Mining Hyperspectral and Global Climate Data

Nonnegativity constraints on solutions, or approximate solutions, to numerical problems are pervasive throughout computational science and engineering. In this talk it is shown how nonnegative tensor factorizations can be used for spectral unmixing in material identification with hyperspectral data, and to analyze massive global multivariate climate datasets. Some speculations and open questions will also be discussed.