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Unusual Tensor Decompositions for Informatics Applications

This presentation will introduce two tensor decompositions that are not well known but have proven useful in informatics applications. Three-way DEDICOM (decomposition into directional components) is an algebraic model with similarities to multidimensional scaling for the analysis of asymmetric 3-way arrays. PARAFAC2 is a modification of the popular PARAFAC (parallel factors) model that is less constrained and allows for different objects in one mode. Applications of both models to informatics problems will be shown.