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SIMULTANEOUS DOUBLE PARTIAL TRIADIC ANALYSIS: THE DO-SPTA METHOD

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Abstract

The relationship between two three-way arrays (data sets of same dimension) or (data cubes) has been the subject of a paper called the Double successive partial triadic analysis (DO-sPTA). More explicitly in this paper, each three-way array is summarized by its compromise and one proceeds afterwards by an analysis of successive Co-inertia of these two compromises; moreover, one determines axes of Co-inertia for the two cubes. This approach is a generalization of the successive partial triadic analysis sPTA. In this article, we propose a simultaneous method in the determination of the solution, called the Double simultaneous Partial Triadic Analysis (DO-SPTA). The interest of this method is to build in a simultaneous way two compromises and two matrices containing of the common axes of representations of the individuals and the variables by an iterative algorithm and converge, or by PCA of the matrix of cross-covariances of these compromises

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