

The fuzzy eigenvalue problem of fuzzy correspondence analysis

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Abstract

In this paper the main problem is the generalization of the fuzzy eigenvalue problem of *Fuzzy Correspondence Analysis* (FCA). We investigate the algebraic foundation of finding fuzzy eigenvalues-eigenvectors of a FCA-fuzzy matrix in some more complex cases. We continue to utilize the two-step method with triangular fuzzy numbers introduced in [20], to accomplish the said generalization. The results of the proposed method are illustrated with two simple numerical examples.

Keywords and phrases : *Correspondence analysis, fuzzy numbers, fuzzy matrix, fuzzy eigenvalue-eigenvector, fuzzy statistics and data analysis.*

1. Introduction

Correspondence Analysis (CA) is a well-known statistical multivariate exploration method, designed to analyze basically two-way and generally multi-way contingency tables (cross-tabulations), with multidimensional input data. The general application of CA and its extension to Multiple Correspondence Analysis, can be done in various ways using some types

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