

Invariant coordinate selection for multivariate data analysis - the package ICS

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Abstract

Invariant coordinate selection (*ICS*) has recently been introduced by Tyler et al. (2008) as a method for exploring multivariate data. It includes as shown in Oja et al. (2006) as a special case a method for recovering the unmixing matrix in independent components analysis (*ICA*). It also serves as a basis for classes of multivariate nonparametric tests. The aim of this paper is to briefly explain the *ICS* method and to illustrate how various applications can be implemented using the R-package ICS. Several examples are used to show how the *ICS* method and ICS package can be used in analyzing a multivariate data set.

Keywords

Independent components analysis, invariant coordinate selection, transformation-retransformation method.

References

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