Behaviormetrics: Quantitative Approaches to Human Behavior 7

Giuseppe Bove · Akinori Okada · Donatella Vicari

## Methods for the Analysis of Asymmetric Proximity Data

This book provides an accessible introduction and practical guidelines to apply asymmetric multidimensional scaling, cluster analysis, and related methods to asymmetric one-mode two-way and three-way asymmetric data. A major objective of this book is to present to applied researchers a set of methods and algorithms for graphical representation and clustering of asymmetric relationships. Data frequently concern measurements of asymmetric relationships between pairs of objects from a given set (e.g., subjects, variables, attributes,...), collected in one or more matrices. Examples abound in many different fields such as psychology, sociology, marketing research, and linguistics and more recently several applications have appeared in technological areas including cybernetics, air traffic control, robotics, and network analysis. The capabilities of the presented algorithms are illustrated by carefully chosen examples and supported by extensive data analyses. A review of the specialized statistical software available for the applications is also provided. This monograph is highly recommended to readers who need a complete and up-to-date reference on methods for asymmetric proximity data analysis.



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