

PROGRAMME AND ABSTRACTS

International Association for Statistical Computing
3rd World Conference on
Computational Statistics & Data Analysis

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T_EX

T27D	Room 3-5	Chair: Paula Brito
Analysis of Symbolic and Structured Data		

(D7.1) 27.02 **Approaches to linear discriminant analysis of interval data**

Presenter: A. Pedro Duarte Silva@Univ. Catolica Portuguesa at Porto, Portugal

Co-authors: Paula Brito

We compare different approaches to the multivariate analysis of interval data, focusing on discriminant analysis. Properties of dispersion and association measures, and their implications in the definition of linear combination of interval variables are discussed. Three fundamental approaches are then considered. The first approach assumes an uniform distribution in each observed interval, derives the corresponding measures of dispersion and association, and appropriately defines linear combinations of interval variables that maximize the usual discriminant criterion. The second approach expands the original data set into the set of all interval description vertices, and proceeds with a classical analysis of the expanded set. Finally, a third approach replaces each interval by a midpoint and range representation. Resulting representations, using intervals or single points, are discussed and distance based allocation rules are proposed. The three approaches are illustrated on a real data set and compared by a simulation study.

Dear Friends and Colleagues,

Welcome to the 3rd International Association for Statistical Computing (IASC) World Conference on Computational Statistics and Data Analysis. The conference co-chairs are happy to host this international conference in Cyprus.

The conference aims at bringing together researchers and practitioners to discuss recent developments in computational methods, methodology for data analysis and applications in statistics. It is associated with the Computational Statistics and Data Analysis (CSDA), the official journal of the IASC. This is an international journal dedicated to the dissemination of methodological research and applications in the areas of computational statistics and data analysis. The CSDA impact factor has risen dramatically over the past years to 1.022, thanks to the effort of the Editorial Board. We wish to personally thank the Associate Editors who have worked so hard and diligently.

The Conference consists of a number of topics (tracks) with their own "Call For Papers" and Chairs. The programme consists of 70 regular sessions, 4 keynote talks, 4 tutorials and over 400 presentations. There are approximately 500 participants. Peer review papers will be considered for publication in thematic special issues of the CSDA journal, or speedily reviewed for publication in regular issues. We are encouraging all participants to consider the CSDA as the medium of publishing their research results.

The co-chairs have endeavored to provide a balanced and stimulating programme that will appeal to the diverse interests of the IASC and its 700 members. The local organizing committee hope that the conference venue will provide the appropriate environment to enhance your contacts and to establish new ones.

The conference is a collective effort of many individuals and organizations. The Advisory Board, Scientific Programme Committee, the Local Organizing Committee and volunteers have contributed substantially to the organization of the conference. We are acknowledging the support of our sponsors and particularly the Department of Public and Business Administration, University of Cyprus, the ERCIM consortium, the European and International Affairs Department of INRIA and INRIA-IRISA, Rennes, France. We are especially grateful to the members of the Matrix Computations and Statistics group Petko Yanev, Mark Hofmann, Cristian Gatu and Paolo Foschi. They have handled most of the technical and organizational aspects of this conference.

We hope that you enjoy the conference and your stay in Cyprus.

The conference co-chairs:

Stanley Azen, Erricos John Kontoghiorghes and Jae Chang Lee

Co-Chairs:

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Erricos John Kontoghiorghes (Chair), University of Cyprus and University of London, UK.
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