

ROBCLA 2006

ROBust CLAssification and Discrimination

with High Dimensional Data

SCIENTIFIC PROGRAM for the ROBCLA WORKSHOP

Wednesday, 25 January 2006

16.00 **Registration**

Poster session

*Bianco A. Boente G. Pires A.M. Rodriguez I.M.
Hekimoglu S. Erenoglu R.C.
Roccato A.*

20.00 Dinner in Villa Agape

Thursday, 26 January 2006

8.45 **Opening remarks by**

Daniela Cocchi (President of the Italian Statistical Society)
Giampiero Nigro (Dean of the Faculty of Economics - University of Florence)
Bruno Chiandotto (Chairman of the local committee - University of Florence)

Theoretical and computational aspects of robust statistics

Chairman: Croux C.

9.15 *Rocke D.M. Lu R. Goldberg Z.*

Some robust and resistant methods for identification of differentially expressed gene groups and pathways

10.00 *Davies P.L.*

Robust statistics: a functional analytic approach

10.25 *Becker C.*

Estimating the dimension in SIR type procedures

10.50 Coffee break

Robust classification and discriminant analysis

Chairman: Critchley F.

11.05 *Croux C. Joossens K.*

Robust discriminant analysis: influence functions and classification efficiencies

11.30 *Todorov V.*

Robust selection of variables in the linear discriminant analysis

11.55 *Crosilla F. Visintini D. Sepic F.*

A combined robust segmentation and classification procedure of spatial objects

- 12.20 *Van Aelst S.*
Robust approaches for linear grouping
- 13.00 Lunch in Villa Agape
- Robust multivariate analysis and software**
Chairman: Rousseeuw P.
- 14.00 *Vichi M.*
Dimensionality reduction with high dimensional data
- 14.45 *Konis K.*
The S-Plus robust library for R
- 15.45 Cultural visit to the Uffizi Gallery and the Vasari Corridor
- 20.00 Dinner in downtown

Friday, 27 January 2006

Robust methods of classification in presence of correlated observations

Chairman: Riani M.

- 9.00 *Peña D. Galeano P. Tsay R.*
Outlier detection in multivariate time series via projection pursuit
- 9.45 *Gallo G.M. Brownlee C.T.*
Error and outlier detection in financial data
- 10.10 *Gather U. Lanius V.*
Methods of robust online signal extraction and applications
- 10.35 Coffee break

Non parametric and semiparametric robust classification techniques

Chairman: Van Aelst S.

- 11.00 *Critchley F. Pires A. Amado C.*
Principal axis analysis
- 11.25 *Filzmoser P.*
Projection pursuit algorithms for robust multivariate methods
- 11.50 *Guddat C.*
A robustness analysis of MARS
- 12.15 *Kalina J. Davies P.L.*
Optimizing templates
- 13.00 Lunch in Villa Agape

Robust cluster analysis

Chairman: Peña D.

- 14.10 *Hennig C.*
Measuring cluster stability
- 14.55 *Agostinelli C. Pellizzari P.*
Hierarchical clustering by means of model grouping
- 15.20 *Oja H. Nevalainen J. Larocque D.*
Multivariate nonparametric methods for cluster correlated data

15.45 Coffee break

Robust regression

Chairman: Atkinson A.C.

16.10 *Coin D.*

Testing the normality in presence of outliers

16.35 *Erenoglu R.C. Hekimoglu S.*

Combination of least median of squares and least squares in case of leverage points for linear regression

20.30 Social dinner

Saturday, 28 January 2006

Robust classification with qualitative data

Chairman: Rocke D.M.

9.00 *Morgenthaler S.*

Fragmenting spectral data

9.45 *Cappelli C. D'Elia A.*

Preliminary identification of relevant covariates in models for ordinal data: a strategy based on tree methods

10.10 *Gottard A. Pacillo S.*

On the impact of contaminations in graphical Gaussian models

10.35 *Mascia P. Mola F.*

Categories reduction in multiple correspondence analysis

11.00 Coffee break

Robust estimation

Chairman: Filzmoser P.

11.20 *Anaya-Izquierdo K. Critchley F. Vines S.K.*

Optimal simple principal components

11.45 *Bellio R. Greco L. Ventura L.*

Quasi-profile and adjusted quasi-profile likelihoods from estimating functions

12.10 *Neykov N. Filzmoser P. Dimova R. Neytchev P.*

Robust fitting of mixtures using the trimmed likelihood estimator

12.35 *Hekimoglu S. Erenoglu R.C.*

Usage of least absolute residuals to increase reliability of least median of squares

13.00 **Concluding remarks by**

Antonio Giusti (Director of the Dept. of Statistics - University of Florence)

Christophe Croux (Convenor of the ESF network "Statistical Analysis of Complex Data with Robust and Related Statistical Methods")

Marco Riani (Local Convenor of the conference)

13.30 Lunch in Villa Agape