

Contents

Part I Key Notes

| | |
|---|----|
| Principal Component Analysis for Categorical Histogram Data: Some Open Directions of Research | 3 |
| Edwin Diday | |
| Factorial Conjoint Analysis Based Methodologies | 17 |
| Giuseppe Giordano, Carlo Natale Lauro, and Germana Scepi | |
| Ordering and Scaling Objects in Multivariate Data Under Nonlinear Transformations of Variables | 29 |
| Jacqueline J. Meulman, Lawrence J. Hubert, and Phipps Arabie | |
| Statistical Models to Predict Academic Churn Risk | 41 |
| Paolo Giudici and Emanuele Dequarti | |
| The Poisson Processes in Cluster Analysis | 51 |
| André Hardy | |
| TWO-CLASS Trees for Non-Parametric Regression Analysis | 63 |
| Roberta Siciliano and Massimo Aria | |

Part II Classification and Discrimination

| | |
|--|----|
| Efficient Incorporation of Additional Information to Classification Rules . | 75 |
| Miguel Fernández, Cristina Rueda, and Bonifacio Salvador | |
| The Choice of the Parameter Values in a Multivariate Model of a Second Order Surface with Heteroscedastic Error | 85 |
| Umberto Magagnoli and Gabriele Cantaluppi | |

| | |
|--|----|
| Mixed Mode Data Clustering: An Approach Based on Tetrachoric Correlations | 95 |
| Isabella Morlini | |

| | |
|---|-----|
| Optimal Scaling Trees for Three-Way Data | 105 |
| Valerio A. Tutore | |

Part III Data Mining

| | |
|---|-----|
| A Study on Text Modelling via Dirichlet Compound Multinomial | 115 |
| Concetto Elvio Bonafede and Paola Cerchiello | |

| | |
|--|-----|
| Automatic Multilevel Thresholding Based on a Fuzzy Entropy Measure .. | 125 |
| D. Bruzzese and U. Giani | |

| | |
|---|-----|
| Some Developments in Forward Search Clustering | 135 |
| Daniela G. Calò | |

| | |
|--|-----|
| Spectral Graph Theory Tools for Social Network Comparison | 145 |
| Domenico De Stefano | |

| | |
|---|-----|
| Improving the MHIST-p Algorithm for Multivariate Histograms of Continuous Data | 155 |
| Mauro Iacono and Antonio Irpino | |

| | |
|--|-----|
| On Building and Visualizing Proximity Graphs for Large Data Sets with Artificial Ants | 165 |
| Julien Lavergne, Hanane Azzag, Christiane Guinot, and Gilles Venturini | |

| | |
|---|-----|
| Including Empirical Prior Information in Test Administration | 173 |
| Mariagiulia Matteucci and Bernard P. Veldkamp | |

Part IV Robustness and Classification

| | |
|--|-----|
| Italian Firms' Geographical Location in High-tech Industries: A Robust Analysis | 185 |
| Matilde Bini and Margherita Velucchi | |

| | |
|---|-----|
| Robust Tests for Pareto Density Estimation | 193 |
| Aldo Corbellini and Lisa Crosato | |

| | |
|--|-----|
| Bootstrap and Nonparametric Predictors to Impute Missing Data | 203 |
| Agostino Di Ciaccio | |

| | |
|---|-----|
| On the Use of Boosting Procedures to Predict the Risk of Default | 211 |
| Giovanna Menardi, Federico Tedeschi and Nicola Torelli | |

Part V Categorical Data and Latent Class Approach

| | |
|--|-----|
| Assessing Similarity of Rating Distributions by Kullback-Leibler Divergence | 221 |
| Marcella Corduas | |

| | |
|--|-----|
| Sector Classification in Stock Markets: A Latent Class Approach | 229 |
| Michele Costa and Luca De Angelis | |

| | |
|---|-----|
| Partitioning the Geometric Variability in Multivariate Analysis and Contingency Tables | 237 |
| Carles M. Cuadras and Daniel Cuadras | |

| | |
|--|-----|
| One-Dimensional Preference Data Imputation Through Transition Rules . | 245 |
| Luigi Fabbri | |

| | |
|--|-----|
| About a Type of Quasi Linear Estimating Equation Approach | 253 |
| Giulio D'Epifanio | |

| | |
|--|-----|
| Causal Inference Through Principal Stratification: A Special Type of Latent Class Modelling | 265 |
| Leonardo Grilli | |

| | |
|--|-----|
| Scaling the Latent Variable Cultural Capital via Item Response Models and Latent Class Analysis | 271 |
| Isabella Sulis, Mariano Porcu, and Marco Pitzalis | |

| | |
|--|-----|
| Assessment of Latent Class Detection in PLS Path Modeling: a Simulation Study to Evaluate the Group Quality Index performance . . . | 281 |
| Laura Trinchera | |

Part VI Latent Variables and Related Methods

| | |
|---|-----|
| Non-Linear Relationships in SEM with Latent Variables: Some Theoretical Remarks and a Case Study | 293 |
| Giuseppe Boari, Gabriele Cantaluppi, and Stefano Bertelli | |

| | |
|--|-----|
| Multidimensional Scaling Versus Multiple Correspondence Analysis When Analyzing Categorization Data | 301 |
| Marine Cadoret, Sébastien Lê, and Jérôme Pagès | |
| Multidimensional Scaling as Visualization Tool of Web Sequence Rules . . | 309 |
| Antonio D'Ambrosio and Marcello Pecoraro | |
| Partial Compliance, Effect of Treatment on the Treated and Instrumental Variables | 317 |
| Antonio Forcina | |
| Method of Quantification for Qualitative Variables and their Use in the Structural Equations Models | 325 |
| C. Lauro, D. Nappo, M.G. Grassia, and R. Miele | |
| Monitoring Panel Performance Within and Between Sensory Experiments by Multi-Way Analysis | 335 |
| Rosaria Romano, Jannie S. Vestergaard, Mohsen Kompany-Zareh, and Wender L.P. Bredie | |
| A Proposal for Handling Categorical Predictors in PLS Regression Framework | 343 |
| Giorgio Russolillo and Carlo Natale Lauro | |
| Part VII Symbolic, Multivalued and Conceptual Data Analysis | |
| On the Use of Archetypes and Interval Coding in Sensory Analysis | 353 |
| Maria Rosaria D'Esposito, Francesco Palumbo, and Giancarlo Ragozini | |
| From Histogram Data to Model Data Analysis | 363 |
| Marina Marino and Simona Signoriello | |
| Use of Genetic Algorithms When Computing Variance of Interval Data . . | 371 |
| Jaromír Antoch and Raffaele Miele | |
| Spatial Visualization of Conceptual Data | 379 |
| Michel Soto, Bénédicte Le Grand, and Marie-Aude Aufaure | |
| Part VIII Spatial, Temporal, Streaming and Functional Data Analysis | |
| A Test of LBO Firms' Acquisition Rationale: The French Case | 391 |
| R. Abdesselam, S. Cieply and A.L. Le Nadant | |

| | |
|---|-----|
| Kernel Intensity for Space-Time Point Processes with Application to Seismological Problems | 401 |
| Giada Adelfio and Marcello Chiodi | |

| | |
|---|-----|
| Summarizing and Mining Streaming Data via a Functional Data Approach | 409 |
| Antonio Balzanella, Elvira Romano, and Rosanna Verde | |

| | |
|--|-----|
| Clustering Complex Time Series Databases | 417 |
| Francesco Giordano, Michele La Rocca, and Maria Lucia Parrella | |

| | |
|---|-----|
| Use of a Flexible Weight Matrix in a Local Spatial Statistic | 427 |
| Massimo Mucciardi | |

| | |
|---|-----|
| Constrained Variable Clustering and the Best Basis Problem in Functional Data Analysis | 435 |
| Fabrice Rossi and Yves Lechevallier | |

Part IX Bio and Health Science

| | |
|--|-----|
| Plaid Model for Microarray Data: an Enhancement of the Pruning Step . | 447 |
| Luigi Augugliaro and Angelo M. Mineo | |

| | |
|--|-----|
| Classification of the Human Papilloma Viruses | 457 |
| Abdoulaye Baniré Diallo, Dunarela Badescu, Mathieu Blanchette, and Vladimir Makarenkov | |

| | |
|---|-----|
| Toward the Discovery of Itemsets with Significant Variations in Gene Expression Matrices | 465 |
| Mehdi Kaytoute, Sébastien Duplessis, and Amedeo Napoli | |

Classification and Multivariate Analysis for Complex
Data Structures

Fichet, B.; Piccolo, D.; Verde, R.; Vichi, M. (Eds.)

2011, XIX, 473 p. 110 illus., 34 illus. in color., Softcover

ISBN: 978-3-642-13311-4