

Contents

Part I Key-note

Clustering of High-Dimensional and Correlated Data	3
Geoffrey J. McLachlan, Shu-Kay Ng, and K. Wang	
Statistical Methods for Cryptography	13
Alfredo Rizzi	

Part II Cluster Analysis

An Algorithm for Earthquakes Clustering Based on Maximum Likelihood	25
Giada Adelfio, Marcello Chiodi, and Dario Luzio	
A Two-Step Iterative Procedure for Clustering of Binary Sequences	33
Francesco Palumbo and A. Iodice D'Enza	
Clustering Linear Models Using Wasserstein Distance	41
Antonio Irpino and Rosanna Verde	
Comparing Approaches for Clustering Mixed Mode Data: An Application in Marketing Research	49
Isabella Morlini and Sergio Zani	
The Progressive Single Linkage Algorithm Based on Minkowski Ultrametrics	59
Sergio Scippacercola	
Visualization of Model-Based Clustering Structures	67
Luca Scrucca	

Part III Multidimensional Scaling

Models for Asymmetry in Proximity Data	79
Giuseppe Bove	

Intimate Femicide in Italy: A Model to Classify How Killings Happened	85
Domenica Fioredistella Iezzi	

Two-Dimensional Centrality of Asymmetric Social Network	93
Akinori Okada	

The Forward Search for Classical Multidimensional Scaling When the Starting Data Matrix Is Known	101
Nadia Solaro and Massimo Pagani	

Part IV Multivariate Analysis and Application

Discriminant Analysis on Mixed Predictors	113
Rafik Abdesselam	

A Statistical Calibration Model for Affymetrix Probe Level Data	121
Luigi Augugliaro and Angelo M. Mineo	

A Proposal to Fuzzify Categorical Variables in Operational Risk Management	129
Concetto Elvio Bonafede and Paola Cerchiello	

Common Optimal Scaling for Customer Satisfaction Models: A Point to Cobb–Douglas' Form	137
Paolo Chirico	

Structural Neural Networks for Modeling Customer Satisfaction	145
Cristina Davino	

Dimensionality of Scores Obtained with a Paired-Comparison Tournament System of Questionnaire Items	155
Luigi Fabbris	

Using Rasch Measurement to Assess the Role of the Traditional Family in Italy	163
Domenica Fioredistella Iezzi and Marco Grisoli	

Contents	xiii
Preserving the Clustering Structure by a Projection Pursuit Approach	171
Giovanna Menardi and Nicola Torelli	
Association Rule Mining of Multimedia Content	179
Adalbert F.X. Wilhelm, Arne Jacobs, and Thorsten Hermes	
Part V Classification and Classification Tree	
Automatic Dictionary- and Rule-Based Systems for Extracting Information from Text	189
Sergio Bolasco and Pasquale Pavone	
Several Computational Studies About Variable Selection for Probabilistic Bayesian Classifiers	199
Adriana Brogini and Debora Slanzi	
Semantic Classification and Co-occurrences: A Method for the Rules Production for the Information Extraction from Textual Data	209
Alessio Canzonetti	
The Effectiveness of University Education: A Structural Equation Model	217
Bruno Chiandotto, Bruno Bertaccini, and Roberta Varriale	
Simultaneous Threshold Interaction Detection in Binary Classification	225
Claudio Conversano and Elise Dusseldorp	
Detecting Subset of Classifiers for Multi-attribute Response Prediction	233
Claudio Conversano and Francesco Mola	
Clustering Textual Data by Latent Dirichlet Allocation: Applications and Extensions to Hierarchical Data	241
Matteo Dimai and Nicola Torelli	
Multilevel Latent Class Models for Evaluation of Long-term Care Facilities	249
Giorgio E. Montanari, M. Giovanna Ranalli, and Paolo Eusebi	
Author–Coauthor Social Networks and Emerging Scientific Subfields	257
Yasmin H. Said, Edward J. Wegman, and Walid K. Sharabati	

Part VI Statistical Models

A Hierarchical Model for Time Dependent Multivariate Longitudinal Data	271
Marco Alfò and Antonello Maruotti	
Covariate Error Bias Effects in Dynamic Regression Model Estimation and Improvement in the Prediction by Covariate Local Clusters	281
Pietro Mantovan and Andrea Pastore	
Local Multilevel Modeling for Comparisons of Institutional Performance	289
Simona C. Minotti and Giorgio Vittadini	
Modelling Network Data: An Introduction to Exponential Random Graph Models	297
Susanna Zaccarin and Giulia Rivellini	

Part VII Latent Variables

An Analysis of Earthquakes Clustering Based on a Second-Order Diagnostic Approach	309
Giada Adelfio	
Latent Regression in Rasch Framework	319
Silvia Bacci	
A Multilevel Latent Variable Model for Multidimensional Longitudinal Data	329
Silvia Bianconcini and Silvia Cagnone	
Turning Point Detection Using Markov Switching Models with Latent Information	337
Edoardo Otranto	

Part VIII Knowledge Extraction from Temporal Data

Statistical and Numerical Algorithms for Time Series Classification	347
Roberto Baragona and Salvatore Vitrano	
Mining Time Series Data: A Selective Survey	355
Marcella Corduas	

Contents	xv
Predictive Dynamic Models for SMEs	363
Silvia Figini	
Clustering Algorithms for Large Temporal Data Sets	369
Germana Scepi	
Part IX Outlier Detection and Robust Methods	
Robust Clustering for Performance Evaluation	381
Anthony C. Atkinson, Marco Riani, and Andrea Cerioli	
Outliers Detection Strategy for a Curve Clustering Algorithm	391
Balzanella Antonio, Elvira Romano, and Rosanna Verde	
Robust Fuzzy Classification	399
Matilde Bini and Bruno Bertaccini	
Weighted Likelihood Inference for a Mixed Regressive Spatial Autoregressive Model	407
Carlo Gaetan and Luca Greco	
Detecting Price Outliers in European Trade Data with the Forward Search	415
Domenico Perrotta and Francesca Torti	
Part X Statistical Methods for Financial and Economics Data	
Comparing Continuous Treatment Matching Methods in Policy Evaluation	427
Valentina Adorno, Cristina Bernini, and Guido Pellegrini	
Temporal Aggregation and Closure of VARMA Models: Some New Results	435
Alessandra Amendola, Marcella Niglio, and Cosimo Vitale	
An Index for Ranking Financial Portfolios According to Internal Turnover	445
Laura Attardi and Domenico Vistocco	
Bayesian Hidden Markov Models for Financial Data	453
Rosella Castellano and Luisa Scaccia	

Part XI Missing Values

Regression Imputation for Space-Time Datasets with Missing Values	465
Antonella Plaia and Anna Lisa Bondi	
A Multiple Imputation Approach in a Survey on University Teaching Evaluation	473
Isabella Sulis and Mariano Porcu	



<http://www.springer.com/978-3-642-03738-2>

Data Analysis and Classification

Proceedings of the 6th Conference of the Classification
and Data Analysis Group of the Società Italiana di
Statistica

Palumbo, F.; Lauro, C.N.; Greenacre, M. (Eds.)

2010, XXII, 482 p. 109 illus., Softcover

ISBN: 978-3-642-03738-2