

Contents

1. Invited Papers

<i>Caliński, T.</i> : On Some Problems in Analysing Non-orthogonal Designs	11
• <i>Chambers, J.M.</i> : Analytical Computing: Its Nature and Needs	22
<i>Chan, T.F., Golub, G.H., and LeVeque, R.J.</i> : Updating Formulae and a Pairwise Algorithm for Computing Sample Variances	30
<i>Eddy, W.F.</i> : Convex Hull Peeling	42
<i>Gerard, J., and Grosbras, J.-M.</i> : Statistical Computing at INSEE	48
• <i>Hájek, P., and Ivánek, J.</i> : Artificial Intelligence and Data Analysis	54
<i>Krzyśko, M.</i> : Classification of Multivariate Autoregressive Processes	61
<i>Lebart, L.</i> : Exploratory Analysis of Large Sparse Matrices with Application to Textual Data	67
<i>Leeuw, J.de</i> : Nonlinear Principal Component Analysis	77
<i>Momirović, K., Štalec, J., and Zakrajšek, E.</i> : A Programming Language for Multi- variate Data Analysis	90
<i>Pokorný, D.</i> : Procedures for Optimal Collapsing of Two-way Contingency Table . .	96
<i>Schechtman, Y., Ibrahim, A., Jockin, J., Pastor J., and Vielle, D.</i> : Computer Science as a Tool Improving Data Analysis Researches and Uses	103
• <i>Sprenger, C.J.A., and Stokman, F.N.</i> : Applied Graph Analysis in the Social Sciences: The Software Project GRADAP	113
<i>Stitt, F.W.</i> : Microprocessors for Biomedical Research, Database Management and Analysis.	121
<i>Sylwestrowicz, J.D.</i> : Parallel Processing in Statistics.	131

2. Contributed Papers

<i>Anderson, A.J.B.</i> : Software to Link Database Interrogation and Statistical Analysis.	139
• <i>Baker, R.J., Green, M., Clarke, M.R.B., Slater, M., and White, R.P.</i> : Development of a Statistical Language	145
<i>Blumenthal, S.</i> : MICROSTAT: A Microcomputer Conversational System for Statistical Data Analysis	150
• <i>Bremner, J.M.</i> : An Algorithm for Nonnegative Least Squares and Projection onto Cones	155
<i>Celeux, G., and Lechevallier, Y.</i> : Non Parametric Decision Trees by Bayesian Approach.	161
<i>Clark, S.</i> : A Comparative Assessment of Data Management Software.	167
<i>Collomb, G.</i> : From Data Analysis to Non Parametric Statistics: Recent Develop- ments and a Computer Realization for Exploratory Techniques in Regression or Prediction	173

<i>Dekker, A.L.</i> : Postgraduate Training for Statisticians – Database Methods	179
<i>Diday, E.</i> : Crossings, Orders and Ultrametrics: Application to Visualization of Consensus for Comparing Classifications	186
• <i>Digby, P.G.N.</i> , and <i>Payne, R.W.</i> : Statistical Programs for Microcomputers: The Implementation of a Directory for Data Structures	192
<i>Dixie, J.</i> : Data Management and Tabulation in OPCS	198
<i>Djindjian, F.</i> , and <i>Leredde, H.</i> : Archaeology, Data Analysis, Computer Science: How to Run Proper Treatment of Archaeological Data	203
<i>Dutter, R.</i> : BLINWDR: Robust and Bounded Influence Regression.	207
<i>Francis, I.</i> , and <i>Lauro, N.</i> : An Analysis of Developers' and Users' Ratings of Statistical Software Using Multiple Correspondence Analysis	212
<i>Friedman, J.H.</i> , <i>McDonald, J.A.</i> , and <i>Stuetzle, W.</i> : Real Time Graphical Tech- niques for Analyzing Multivariate Data	218
<i>Gautier, J.-M.</i> , and <i>Saporta, G.</i> : About Fuzzy Discrimination.	224
<i>Gentle, J.E.</i> : A Fortran Preprocessor for Statistical Data Analysis.	230
<i>Gilchrist, R.</i> : An Analysis of Continuous Proportions.	236
<i>Gordesch, J.</i> : A Sampling Procedure for Historical Data	242
<i>Grize, F.</i> , <i>Bliss, J.</i> , and <i>Obgorn, J.</i> : Use of Systemic Networks for Text Analysis . .	248
<i>Grossmann, W.</i> , and <i>Pflug, G.Ch.</i> : SPASP – A Statistical Program for the Analysis of Stochastic Processes	254
<i>Hague, S.J.</i> , <i>Ford, B.</i> , and <i>Lambert, T.W.</i> : TOOLPACK: Improving the Program- ming Environment for Statistical Software	260
<i>Haux, R.</i> : A Programming Technique for Software in Statistical Analysis.	266
<i>Hext, G.R.</i> : A Comparison of Types of Database System Used in Statistical Work .	272
<i>Joiner, B.L.</i> : The Frontiers of Statistical Analysis	278
<i>Kobayashi, Y.</i> , <i>Futagami, K.</i> , and <i>Ikeda, H.</i> : Implementation of a Statistical Database System: HSDB.	282
<i>Korhonen, P.</i> , and <i>Bläfield, E.</i> : A Synthetic Approach to Multivariate Normal Clustering	288
<i>Kredler, Ch.</i> , and <i>Fahrmeier, L.</i> : Variable Selection in Generalized Linear Models .	294
<i>Läuter, H.</i> : Approximation of Surfaces in (p+1)-Dimensional Spaces.	300
<i>LeRoux, S.</i> , <i>Messean, A.</i> , and <i>Vila, J.-P.</i> : Standardized Comparison of Nonlinear Model Fitting Algorithms	306
<i>Linde, A.v.d.</i> : Numerical Approach to the Optimal Design Problem for Regression Models with Correlated Errors	312
<i>McNicol, J.W.</i> , and <i>Ng, S.C.M.</i> : An Experimental Design and Analysis Package for Microcomputers	318
→ <i>Mallet, J.L.</i> : Propositions for Fuzzy Characteristic Functions in Data Analysis . .	324
<i>Marti, M.</i> , <i>Prat, A.</i> , and <i>Catot, J.M.</i> : Integrated System for Modelling Multivariate Time Series	330
• <i>Mélard, G.</i> : Software for Time Series Analysis.	336