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Advances in Data Analysis, Data Handling and Business Intelligence

Proceedings of the 32nd Annual Conference of the Gesellschaft für Klassifikation e.V., Joint Conference with the British Classification Society (BCS) and the Dutch/Flemish Classification Society (VOC), Helmut-Schmidt-University, Hamburg, July 16–18, 2008

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Preface

This volume contains the revised versions of selected papers presented during the 32nd Annual Conference of the German Classification Society (Gesellschaft für Klassifikation – GfKl). The GfKl 2008 conference, which was organized in cooperation with the British Classification Society (BCS) and the Dutch/Flemish Classification Society (VOC), was hosted by Helmut-Schmidt-University, Hamburg, Germany, in July 2008. The focus of the conference was Data Analysis, Data Handling, and Business Intelligence. The conference featured 13 invited lectures (3 plenary speeches and 10 semi-plenary lectures), 166 contributed talks, 4 invited sessions, and 2 workshops. With 275 participants from 22 countries in Europe and overseas this GfKl Conference, once again, provided an international forum for discussions and mutual exchange of knowledge with colleagues from different fields of interest. From 95 full papers that had been submitted for this volume 71 submissions were finally accepted.

The scientific program included a broad range of topics. Interdisciplinary research and the interaction between theory and practice were particularly emphasized. The following sections (with chairs in alphabetical order) were established:

Theory and Methods:
Exploratory Data Analysis (R. Wehrens); Clustering and Classification (H.-H. Bock and M. Vichi); Optimization in Statistics (G. Ritter); Pattern Recognition and Machine Learning (P.J.F. Groenen and E. Hüllermeier); Visualization and Scaling Methods (C. Hennig and M. van de Velden); Mixture Analysis (A. Montanari and W. Seidel); Bayesian, Neural, and Fuzzy Clustering (R. Kruse and H.A. Le Thi); Computational Intelligence and Metaheuristics (A. Fink); Evaluation of Clustering Algorithms and Data Structures (F. Leisch).

Application Fields:
Subject Indexing and Library Science (H.-J. Hermes and B.W.J. Lorenz); Marketing and Management Science (R. Decker and D. van den Poel); Collective Intelligence (A. Geyer-Schulz); Text Mining (W. Gaul and L. Schmidt-Thieme); Banking and Finance (H. Locarek-Junge); Market Research, Controlling, and OR (D. Baier,

Y. Boztug, and W. Steiner); Biostatistics and Bioinformatics (A. Benner and A.-J. Boulesteix); Genome and DNA Analysis (H.-P. Klenk); Medical and Health Sciences (B. Lausen); Archaeology (T. Kerig and I. Herzog); Processes in Industry (F. Joos); Spatial Planning (M. Behnisch); Linguistics (H. Goebl and P. Grzybek); Statistical Musicology (C. Weihs); Education and Psychology (S. Krolak-Schwerdt).

Invited sessions were organized by colleagues from associated societies, namely the British Classification Society (BCS, C. Hennig and F. Murtagh) and the Dutch/Flemish Classification Society (VOC, M. van de Velden and R. Wehrens). Additionally, two invited sessions were organized on the topics PLS Path Modeling (V. Esposito Vinzi) and Microarrays in Clinical Research (B. Lausen and A. Ultsch). Furthermore, there was a pre-conference workshop on "Data Quality: Defining, Measuring and Improving" (H.-J. Lenz) and a workshop on "Libraries and Decimal Classification" (H.-H. Hermes).

The editors would like to thank the section chairs for doing a great job in organizing their sections. Cordial thanks for the paper reviews go to the section chairs, the additional members of the scientific program committee (V. Esposito Vinzi, W. Esswein, C. Fantapié Altobelli, H. Hebbel, K. Jajuga, A. Okada, D. Steuer, U. Tüshaus, and I. van Mechelen) as well as the additional reviewers (W. Adler, T. Augustin, L.B. Barsotti, M. Behnisch, A. Brenning, D.G. Calò, G.P. Celeux, B. Garel, E. Gassiat, E. Godehardt, L. Häberle, E. Haimerl, U. Henker, H. Holzmann, T. Kerig, R. Klar, S. Lessmann, H. Lukashevich, S. Matos, F.R. McMorris, F. Meyer, F. Mörchen, H.-J. Mucha, O. Opitz, V. Patilea, S. Potapov, S. Santana, T. Scharl, M. Schwaiger, K. Sever, K. Sommer, R. Stecking, C. Strobl, N.X. Thinh, and M. Trzesiok).

Based on the reviews and a further in-depth examination, two papers were granted the best paper award: Bernard Haasdonk and Elżbieta Pękalska: Classification with Kernel Mahalanobis Distance Classifiers; Wiebke Petersen: Linear Coding of Non-linear Hierarchies – Revitalization of an Ancient Classification Method.

The great success of the GfKl 2008 conference would not have been possible without the support of the members of the local organization committee (C. Fantapié Altobelli, A. Fink, H. Hebbel, W. Seidel, D. Steuer, and U. Tüshaus) and many other people mainly working backstage. As representatives of the whole team, we would like to particularly thank Y. Köllner and M. Schäfer for their exceptional efforts and great commitment with respect to the preparation and organization of the conference. The GfKl Conference 2008 was facilitated by the financial and/or material support of the following institutions and companies (in alphabetical order): Deutsche Forschungsgemeinschaft, Freunde und Förderer of Helmut-Schmidt-Universität Hamburg, Gesellschaft für Klassifikation, Gesellschaft für Konsumforschung, Hamburg-Mannheimer Versicherungen, Hamburger Sparkasse, Helmut-Schmidt-Universität Hamburg, Statsoft GmbH, Vattenfall, and Volksfürsorge Deutsche Lebensversicherung AG. We express our gratitude to all of

them. We would also like to thank M. Bihn from Springer-Verlag, Heidelberg, for her support and dedication to the production of this volume.

In closing we wish to thank all the authors who contributed to this book. Without their work and passion, this book would not have been possible.

Hamburg and Marburg (Germany),
and Colchester (UK),
March 2009

Andreas Fink
Berthold Lausen
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Alfred Ultsch

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