

Contents

Concepts and Lattices

Classification of Concepts Through Products of Concepts and Abstract Data Types <i>P. Valtchev, J. Euzenat</i>	3
Capacities and Credibilities in Analysis of Probabilistic Objects <i>E. Diday, R. Emilion</i>	13
Exploration Tools in Formal Concept Analysis <i>G. Stumme</i>	31
Explication of the Nature of a "Concept of a Context" in the Light of the Nature of the "Context" as Implied by Aristotle's Theory <i>J.P. Sutcliffe</i>	45
Towards a Spatial Representation of Conceptual Structures <i>G. Émond, M. Longeart</i>	58
Formal Concept Analysis of Verb Paradigms in Linguistics <i>A. Grosskopf</i>	70

Knowledge Spaces and Symbolic Data Analysis

Knowledge Analysis Using the Metrics in the Knowledge Space <i>N.G. Zagoruiko</i>	83
A Fuzzy Symbolic Pattern Classifier <i>M. Ichino, H. Yaguchi, E. Diday</i>	92
Knowledge Extraction Using Stochastic Matrices - Application to Elaborate Fishing Strategies <i>J. Ferraris, M. Gettler-Summa, C. Pardoux, H. Tong</i>	103
A Knowledge Acquisition System Based on the Cartesian Space Model <i>H. Yaguchi, M. Ichino, E. Diday</i>	113
Normalization Based Dimensionality Reduction of Symbolic Data: A New Approach <i>K. Lingnagouda, P.Nagabhushan, K.C. Gowda</i>	123

Rules Induction and Learning

Comparison Between Some Indices Mainly Used in Machine Learning <i>L. Fleury, Y. Masson</i>	137
Structuration Sets with Implication Intensity <i>R. Gras, H. Briand, P. Peter</i>	147
A Connexionist Approach for the Automatic Extraction of Categorization Rules from Symbolic Data <i>J.-D. Kant</i>	157
Contribution of Related Geometrical Graphs in Pattern Recognition <i>M. Sebban, S. Rabaseda, O. Boussaid</i>	167

Methodological Developments in Decision Trees. An Application to Protein Secondary Structure Prediction <i>I.C. Lerman, J.F.P. Da Costa</i>	179
On the Computational Hardness of Learning from Structured Symbolic Data <i>P. Jappy, O. Gascuel</i>	189
Tree-Growing with Probabilistically Imprecise Data <i>A. Ciampi, E. Diday, J. Lebbe, E. Périnel, R. Vignes</i>	201
Dissimilarities	
Minimum Spanning Trees and Dissimilarity Analysis <i>B. Leclerc</i>	215
An Order-Theoretic Foundation for Similarity Measures <i>S. Geist, K. Lengnink, R. Wille</i>	225
Determining the Distance Index <i>V. Batagelj, M. Bren</i>	238
Properties of an Order Distance Associated with a Tree Distance <i>F. Bonnot, A. Guénoche, X. Perrier</i>	252
Clustering and Categorization	
Optimal Hierarchical Clustering with Order Constraint <i>J. Lebbe and R. Vignes</i>	265
Clustering, Distances and Knowledge from Data <i>J.W. Owsinski</i>	277
Knowledge-Based Clustering <i>M.N. Murty, A.K. Jain</i>	288
Consensus	
Intersection Rules for Consensus Hierarchies and Pyramids <i>F.R. McMorris, R.C. Powers</i>	301
A Bonsai Branch and Bound Method Applied to Voting Theory <i>I. Charon, A. Guénoche, O. Hudry, F. Woïgard</i>	309
Structural Characterizations of the Path Independence Property for Set Transformations <i>A.V. Malishevski</i>	319
On Optimization Models for Aggregating Incomplete Preferences <i>P.Y. Chebotarev, E. Shamis</i>	328
Axiomatic Characterization of Preference Aggregation Rules in Infinite Setting <i>A. Vladimirov</i>	339

Probabilistic Aspects

The Equivalence Relation Polytope and Random Classification and Clustering	
<i>R. Suck</i>	351
A L_1 -norm PCA and a Heuristic Approach	
<i>A. Baccini, Ph. Besse, A. de Falguerolles</i>	359
Authors Index	369