

PREFACE

The scope of the International Book Series "Information Science and Computing" (IBS ISC) covers the area of Informatics and Computer Science. It is aimed to support growing collaboration between scientists from all over the world. IBS ISC is official publisher of the works of the members of the ITHEA International Scientific Society.

The official languages of the IBS ISC are English and Russian.

IBS ISC welcomes scientific papers and books connected with any information theory or its application.

IBS ISC rules for preparing the manuscripts are compulsory.

The rules for the papers and books for IBS ISC are given on www.foibg.com/ibsisc.

The camera-ready copies of the papers should be received by ITHEA Submission System <http://ita.ithea.org>.

The camera-ready copies of the books should be received by e-mail: info@foibg.com.

Responsibility for papers and books published in IBS ISC belongs to authors.

The Number 8 of the IBS ISC contains collection of papers from the fields of Classification, Clustering, Pattern Recognition, Forecasting, Features Processing, Transformations, Data Mining, and Knowledge Discovery.

Papers are peer reviewed and are selected from the several International Conferences, which were part of the Joint International Events of Informatics "ITA 2009" – summer session, Varna, Bulgaria.

The book maintains articles on actual problems of classification, data mining and forecasting:

- New approaches, algorithms and methods of construction of steady and smooth logic algorithms of type of computation of the estimations, steady piece-wise linear algorithms of classification;
- The algebraic theory of algorithms - problems of complexity and resolvability of challenges of classification, construction of optimum algebraic proof-readers over sets of algorithms of computation of estimations;
- Methods of search of logic regularities of classes (knowledge) and their statistical verification, association rule mining, extract of knowledge by means of neural networks;
- Researches in area of neural network classifiers and self-organizing maps, principles of designing and results of use heterogeneous gene - neural networks;
- Questions of complexity of some discrete optimization tasks and corresponding tasks of data analysis and pattern recognition;
- Estimation of probability of erroneous classification, comparison of approaches and optimization of estimations, risk estimation in regression models;
- The specialized task-oriented algorithms for analysis and recognition of numerical and vector sequences, structures in DNA-sequences, methods of automatic classification and modeling of a genetic code;
- Logic and probabilistic models constructing for multivariate heterogeneous time series,
- Machine learning methods for variable aggregation and transformation.

It is represented that book articles will be interesting as experts in the field of classifying, data mining and forecasting, and to practical users from medicine, sociology, economy, chemistry, biology, and other areas.

ITA 2009 has been organized by

ITHEA International Scientific Society

in collaboration with:

- Institute of Information Theories and Applications FOI ITHEA
- Dorodnicyn Computing Centre of the Russian Academy of Sciences
- International Journal "Information Theories and Applications"
- International Journal "Information Technologies and Knowledge"
- Association of Developers and Users of Intelligent Systems (Ukraine)
- Association for Development of the Information Society (Bulgaria)
- V.M.Glushkov Institute of Cybernetics of National Academy of Sciences of Ukraine
- Institute of Mathematics and Informatics, BAS (Bulgaria)
- Institute of Information Technologies, BAS (Bulgaria)
- Institute of Mathematics of SD RAN (Russia)
- Taras Shevchenko National University of Kiev (Ukraine)
- Universidad Politecnica de Madrid (Spain)
- BenGurion University (Israel)
- Rzeszow University of Technology (Poland)
- University of Calgary (Canada)
- University of Hasselt (Belgium)
- Kharkiv National University of Radio Electronics (Ukraine)
- Astrakhan State Technical University (Russia)
- Varna Free University "Chernorizets Hrabar" (Bulgaria)
- National Laboratory of Computer Virology, BAS (Bulgaria)
- Uzhgorod National University (Ukraine)

The main ITA 2009 events were:

KDS	XVth International Conference "Knowledge - Dialogue – Solution"
i.Tech	Seventh International Conference "Information Research and Applications"
MeL	Fourth International Conference "Modern (e-) Learning"
INFOS	Second International Conference "Intelligent Information and Engineering Systems"
CFDM	International Conference "Classification, Forecasting, Data Mining"
GIT	Seventh International Workshop on General Information Theory
ISSI	Third International Summer School on Informatics

More information about ITA 2009 International Conferences is given at the www.ithea.org .

The great success of ITHEA International Journals, International Book Series and International Conferences belongs to the whole of the ITHEA International Scientific Society.

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