



**THE FIFTH INTERNATIONAL SYMPOSIUM
OF
ECONOMIC INFORMATICS**

**BUCHAREST
10 - 13 MAY 2001**

Senior Staff Editor

Ion IVAN

Ion Gh. ROSCA

Section 1

Ion SMEUREANU

Marian DARDALA

Section 2

Gheorghe SABĂU

Elena POSDARIE

Section 3

Bogdan GHILIC-MICU

Marian STOICA

Section 4

Rodica MIHALCA

Iulian INTORSUREANU

Section 5

Ion IVAN

Doru CAZAN

Section 6

Ion ODAGESCU

Titus FURTUNA

Section 7

Constanța BODEA

Ramona LUPU

Section 8

Ion LUNGU

Mihaela MUNTEAN

Senior Staff Text Processing

Ilăana Adina UȚĂ

Marian DARDALA

Elena POSDARIE

Marian STOICA

Iulian INTORSUREANU

Doru CAZAN

Titus FURTUNA

Ramona LUPU

Mihaela MUNTEAN

The volume contains the papers presented at the 5th International Symposium of Economic Informatics of Romania, which was held from May 10-13, 2001, in Bucharest.

The Symposium was set up by the Department of Economic Informatics and has been honoured by the presence of several specialists from the Austria, Belgium, Bulgaria, Finland, France, Germany, Greece, Ireland, the Republic of Moldavia, United Kingdom, United States of America, Japan and Romania.

We give our thanks to the participants, sponsors, to the press, students, to the colleagues of the Academy of Economic Studies Bucharest, who, by their efforts, skills and understanding, contributed to the good of the Symposium.

SECTION 1 – Multimedia Systems and Computer Aided Training

- **An Extensible Framework for Building Interactive Courses on Web**
Sabin Corneliu BURAGA Faculty of Computer Science,
"A.I.Cuza" University of Iasi, Romania 1
- **CAE-axiomatic approach**
Sergiu CREȚU AMBROZIE,
The Academy of Economic Studies of Moldova, Republic of Moldova 7
- **Multimedia Programming Objects**
Ion SMEUREANU, Marian DÂRDALĂ,
Academy of Economic Studies, Bucharest, Romania 9
- **Pour un enseignement des spécifications formelles dans les formations économiques et juridiques**
Henri HABRIAS,
IRIN (Institut de Recherche en Informatique de Nantes),
Université de Nantes, Nantes, France 16
- **Supporting Virtual Communities and Knowledge Transfer through Web-based Competence Centres**
Ileana HAMBURG, Institut Arbeit und Technik Wissenschaftszentrum,
Nordrein Westfalen, Germany,
Dorin BALANICA, Gh Asachi Technical University,
Computer Science Dept., Iasi, Romania 20
- **Building CORBA-based systems for distributed learning environments**
Cosmina IVAN, Technical University of Cluj Napoca,
Department of Computer Science, Cluj Napoca, Romania 26
- **IT in distance and open learning-an historical overview**
Ramona LACUREZEANU, Lucia RUSU,
Facultatea de Științe Economice , Cluj-Napoca, Romania 33
- **Developing Microeconomics tests using Asymetrix ToolBook and Web-CT**
Dorin. LIXANDROIU, Ioana NEGRU,
Transilvania University of Brașov, Romania 39
- **A proposed application for school-leaving examination**
Anca MIHAELA, Liceul "Traian", Bucharest, Romania 44

• A Client/Server Application for Virtual BookShop-VirtualMall Maria MOISE, Management Faculty AISTEDA – I.C.Bratianu University, Institutul de Cercetare Dezvoltare in Informatica, Bucharest, Romania Mss. Marylena ZINGALE, United Nations, New York, USA	48
• Some Remarks about the Web Based Distance Learning and Education in Economics Ştefan Ioan Nițchi, Cluj-Napoca, Romania	58
• Using Speech Technology and Internet for Creating a Virtual Classroom. Nicolae OBJELEAN, ASUM, Chishinau, Republic of Moldova. Zinaida TODOROI, FIUM, Chishinau, Republic of Moldova., Alexandru OBJELEAN, "Babes-Bolyai" University ,Cluj-Napoca, Romania..	63
• Rule Extraction by Inductive Learning Algorithms Mihaela M. OPREA, Department of Computer Science, University of Ploiesti, Romania	68
• Method of automated structurization of theoretical and practical material, prepared by teachers before it's presented to the auditorium and using it in distance education. Nicolai PELIN, Serghei PELIN, University of Applied Sciences of Moldova, Chisinau,	74
• Parallel algorithm model for backpropagation network Mădălina RĂCEANU, Bucharest, Romania	81
• Media data control and integration in telephony Adriana REVEIU, Academy of Economic Studies, Bucharest, Romania	86
• Distance Education in Moldova. Prospects and opportunities. Stephan SPATARU, The Academy of Economic Studies Chisinau, Republic of Moldova.....	93
• The Educational Technologies: Information System for Knowledge Testing Tamara ZACON, Simion ONEA, Chisinau, Republic of Moldova,.....	100
• Qualification strategies for the Romanian multimedia industry Viorel ARITON, "Danubius" University from Galati, Romania, Vincent EDWARDS, Buckinghamshire Chilterns University College, United Kingdom, Gloria LEE, Buckinghamshire Chilterns University College, United Kingdom, Jenny COLLYER, London Guildhall University, United Kingdom, Doinita ARITON, "Dunarea de Jos" University Romania, Constantin SAULEA, S.C. TcInf Galati, Romania	105
• Retrieving Universal Visual Paradigms. S.H.BEAN., Multimedia Group.Dept. of Computer Science, University College Cork. Rep. of Ireland.....	111

•	IT Education of the Project Managers Constanta Bodea, The Academy of Economic Studies, Bucharest, Romania.....	116
•	Education aux Médias Ana Maria Laculeanu, Rm. Valcea, Romania	121
•	Telemarketing Lascu RÎCU, Georgeta ȘOAVĂ, University of Craiova, Faculty of Science Economics.....	126
•	Multimedia Documents System as Support for Interactive Education Georgeta DRULĂ, University of Bucharest, Bucharest, Romania.....	130

SECTION 2 – Information Systems for Social Processes

•	Optimal Trajectories of Business Development Taking into Account the Environment Protection Anca ANDREI, Daniela MARINESCU Academy of Economic Studies, Bucharest, Romania.....	135
•	On a project of IT usage in economic-social development at district level Virginia BUTESCU, Academy of Economic Studies, Bucharest, Romania....	141
•	The Human Resource – The Most Important Element of the Informational Society Development Giani GRĂDINARU, Academy of Economic Studies, Bucharest, Romania ..	145
•	About An Information Support System For The Medical Management Rahman HADI, "Bogdan Vodă" Foundation, Cluj-Napoca, Romania	149
•	Privatisation And The Informational Society Cătălin Emilian HUIDUMAC-PETRESCU Academy of Economic Studies, Departament of Economics, Bucharest, Romania	154
•	Mutations économiques, sociales et culturelles induites par les nouvelles technologies de l'information et de la communication Constanța MIHĂESCU, Academy of Economic Studies, Bucarest,.....	160
•	Controlling – Concept and Practical Method for Strategic and Operative Management of Investments Camelia RATIU-SUCIU, Academy of Economic Studies, Bucharest, Romania.....	163
•	L'échec De La Privatisation Dans La Capitalisation Des Firmes Roumaines Gheorghe SANDU, Maître de conférences, Université « Ștefan cel Mare » de Suceava, Roumanie Ovidiu Florin HURJUI, Ingénieur du système, Université « Ștefan cel Mare » de Suceava, Roumanie	168

• La personnalisation des systèmes informatiques de la gestion des ressources humaines Adriana ȘCHIOPOIU BURLEA, Université de Craiova, Romania	173
• Detecting Divergent Observations in Large Periodical Social Survey Emilia ȚIȚAN, Simona GHITĂ, Academy of Economic Studies, Bucharest, Romania	178
• Risk and Uncertainty in Information Systems for Insurance Management Andreea Simona VARJOGHE, Academy of Economic Studies, Bucharest, Romania	183
• An Illustration of IT in Practice Teodora VĂTUIU, Academia Română de Management, Târgu Jiu, România.....	188
• Stages in SSM Manole VELICANU, Ion LUNGU, Mihaela MUNTEAN Academy of Economic Studies, Bucharest, Romania	194
• Juridical Databases in Information Society Cristian USCATU, Academy of Economics, Bucharest, Romania	200

SECTION 3 – Information Systems for Business and Regional Development

• Developing .Net Solutions Constantin APOSTOL, Academy of Economis Studies, Bucharest, Romania Viorel LUPU, Daniel BĂLĂCEANU, Online Services SRL, Romania.....	205
• IS/IT Evaluation - A Major Challenge of the Emerging Information Society Gabriela AVRAM, AISTEDA Alba-Iulia, Romania.....	215
• Les précautions à prendre pour acheter par Internet Antoaneta BUTUZA, Universitatea de Vest Timisoara, Facultatea de Ştiinte Economice, Catedra de Informatică Economică, Timișoara, România	220
• How to Success in the Mobile Wireless Enterprise Adriana Elena CAILEANU, Infodesign Group S.A, Bucharest, Romania.....	231
• Payment system for Small and Medium Enterprises (SME's) Dana COLIBABA, Academy of Economic Studies, Bucharest, Romania	239
• Internet révolutionne les achats Simona DALOTĂ, Universitatea de Vest Timișoara, Facultatea de Ştiințe Economice, Catedra de Informatică Economică, Romania	243
• Internet and Intranet Portals Aniela DANCIU, The Academy of Economic Studies, Bucharest, Romania ..	249

- **Some considerations about IT as Strategic Resource**
Gherasim ZENOVIC, Defence Research Agency, Ministry of National Defence, Bucharest, Romania, Aurelian IONESCU, Defence Policy Department, Ministry of National Defence, Bucharest, Romania 254
- **Cybermarketing**
Bogdan GHILIC-MICU, Academy of Economics Studies, Economy Informatic Department, Bucharest, Romania 262
- **E-business Integration and Application Hosting**
Marius GURAN, University Politehnica of Bucharest, Romania 267
- **Le développement des entreprises intelligentes dans le domaine de l'e-business**
Maria-Gabriela HOZA, Facultatea de Științe Economice, UBB Cluj-Napoca, Romania, Patrick FERRÉ, I.U.T de Tarbes/ Université, Paul SABATIER - Toulouse, France 272
- **Business Integration of the Enterprise Information Management**
"Core Business of the each Organism is the Information Business"
Ibrahim KAPLAN, Kiever National Taras Shevchenko University, Ukraine .. 279
- **Communities On Line - a new step towards Information Society**
Angela IONITA, Romeo ILIE, National Institute for Research and Development in Informatics - ICI Bucharest, Romania, 303
- **The Key Principles of an Internet Banking Implementation**
Răzvan Daniel ZOTA, Academy of Economic Studies, Bucharest, Romania. 311
- **New Business Solutions in the Internet Age**
Vasile BODEA, The Academy of Economic Studies, Bucharest, Romania.... 319
- **The impact of the Internet on the economical processes in the Republic of Moldova**
Nadejda DRUCIOC, The Free International University of Moldova, Chișinău, Moldova 324
- **Mobile Agents: Are they a good solution?**
Ana Ramona LUPU, Academy of Economic Studies, Bucharest, Romania.... 328
- **Desire and Trust: Fundamentals of the New Economy**
Adrian MIHALACHE , "Politehnica" University of Bucharest, Romania
Viorel IONESCU, Military Technical Academy, Bucharest, Romania..... 334
- **Business Process Integration through XM**
Floarea NĂSTASE, Academy of Economic Studies, Bucharest, Romania 339

• Cryptographic methods and techniques for authentication through digital signature in e-commerce. Juridical controversies and national approach Ion Gh. ROȘCA, Floarea NĂSTASE, Octavian PAIU, Gabriel ȘUTAC, Carmen STANCIU, Academy of Economic Studies, Bucharest, Romania, Victor PATRICIU, Ion BICA, ATM Bucharest, Romania	345
• PRODCONT-BUSINESS a business to business software for petrochemical plants Cornel RESTEANU, Pavel Marius NISTOR, Research Institute for Informatics, Bucharest, Romania	353
• Intranet and Workgroup Prof. Ion Gh. ROȘCA, Marian STOICA, Academy of Economics Studies, Economy Informatic Department, Bucharest, Romania	363
• Intelligent Agents for E-Commerce Carmen STANCIU, Academy of Economic Studies, Bucharest, Romania.....	371
• Productivity and The Economic Growth Constantin DUGULEANĂ, Faculty of Economic Sciences University TRANSILVANIA Brașov, Romania	380
• L'aspect fonctionnel d'organisation des informations de système managérial économique Tudor LEAHU, Université Coopérative-Commerciale de Moldova, Chișinău, Moldova	383
• A model for representing product knowledge acquired from the web Costin BADICA, Dept.of Computer Science, King's College London, UK, Amelia BADICA, Valentin LITOIU, Faculty of Economic Studies, University of Craiova, Romania.....	390
• Illustration of positive and negative interactions in marketing Niculae V. MIHĂITĂ, Academy of Economic Studies, Cybernetics, Statistics and Informatics Faculty, Bucharest, Romania.....	397
• Theory, Concepts, and Practical Implications of an Organizational PKI Victor-Valeriu PATRICIU, Ion BICA, Military Technical Academy, Bucharest, Romania	402
• WAP Phone Book Adrian PETRESCU, Bucharest, Romania, Nirvana POPESCU, Bucharest, Romania, Decebal POPESCU, Bucharest, Romania, Cornel POPESCU, Bucharest, Romania, George NICOLAE, Bucharest, Romania	408
• WAP service and its economic applications Petru STEPANOV, Universitatea Banatului Timișoara Facultatea de Științe Economice, România	412

• Interconnection banking system development requirements	417
Cristian DIACONU .....	.....
• Telemedicine in the World of “Tele” Everything	424
Marian STOICA, Academy of Economics Studies, Economy Informatic Department, Bucharest, Romania .....	.....
• Managerial application for simulating firms rivalry	428
Silvia SUMEDREA, „Transilvania” University, Brasov, Romania.....	.....
• E-commerce and The Principles of Online Privacy	433
Ion IVAN, Academy of Economic Studies Bucharest, Romania, Laurentiu TEODORESCU, D.G.F.P.C.F.S. Constanta .....	.....
• New paradigms of new economy	438
Adrian TOIA, Western IQ Bucharest, Romania .....	.....
• The Role of New Informational Technologies in Moldova’s Small Business	443
E. CHISLARU, S. PERETEATCU, A. SOLCAN, S. TUTUNARU, Chisinau, Republic of Moldova .....	.....
• Actual Trend For on-line Transaction Security	447
Tiberiu ZBÎRNEA, Ministry of Defense, Bucharest, Romania .....	.....
• Implementing Tarantella Solution for eBusiness	451
Cornel Sebastian ZUVELCĂ, CEC Găești, Romania .....	.....
• Interactive Distance Learning	458
Dr. Ileana Adina UTĂ, Academy of Economic Studies, Bucharest, Romania, Viorel UTĂ, National Institute for Research and Development in Informatics – ICI, Bucharest, Romania .....	.....

SECTION 4 – Economic Processes, Optimisation and Models

• Review of analitical models for assesing vulnerabilities of financial systems	465
Mircea BOŞCOIANU, Military Technical Academy Bucharest .....	.....
• How to Restructure a Growth Portfolio	470
Adrian BADESCU, Andreea FULGA, Academy of Economic Studies, Bucharest, Romania .....	.....
• Une méthode d’implémentation d’un algorithme de détermination des exposants de Lyapunov dans situations chaotiques, pour un système dynamique qui régit l’évolution du taux de change	478
Ştefan BALINT, Mirela Catrinel VOICU, l’Université de l’Ouest de Timişoara, Timişoara, Roumanie .....	.....
• Quantitative methods in adjusted forward-rate forecast	483
Laura CALANCIA, Romanian Banking Institute, Romania .....	.....

• Stochastic frontier approach to efficiency measurement Luiza BĂDIN, Roxana CIUMARA, Academy of Economic Studies, Bucharest, Romania	488
• Possibilities of modelling regional economic growth Daniela Luminita CONSTANTIN, Department of Statistics and Economic Forecasting, Academy of Economic Studies of Bucharest, Romania.....	493
• Programming Of Supply And Wares Stocks With Sesonal Demand Doina DĂNĂIAȚĂ, Alexandra POPOVICS Universitatea de Vest, Timișoara, Romania	498
• The Concept Of The Tourist Informational System Maifer Remzie DEMIRBEC, "GAUDEAMUS" University, Constanta	504
• The decision of strategy for a homogeneous strategic unity Ion DOBRE, Academy Of Economic Studies, Bucharest, România ION PĂUNESCU, University Spiru Haret, București, România	508
• Two-Dimensional Cutting Stock Problems Using Evolutionary Algorithms Csaba .FABIAN, Academy of Economic Studies, Economic Informatics Department, Bucharest, Romania.....	513
• The application of utility theory within decision analysis Florica LUBAN, The Academy of Economic Studies, Bucharest, Romania ...	518
• On a Feasible Directions Method for Nonlinear Programming Sorina GRAMATOVICI, Academy of Economic Studies, Faculty of Economic Cybernetics, Statistics and Informatics, Economic Cybernetics Department, Bucharest, Romania.....	528
• The Analysis of Economic Phenomena using Nonlinear Regression Models Tudorel Andrei, Andreea Iluzia IACOB, Academy of Economic Studies, Bucharest, Romania	533
• Profit Firm Forecasting Using an Econometric Model Liliana DUGULEANĂ, Faculty of Economic Sciences, University TRANSILVANIA, Brasov, Romania	544
• Macroeconomic Decisions: Information And Model Emil SCARLAT, Virginia MARACINE, Cybernetics Department, Academy of Economic Studies Bucharest, Romania	553
• The Implementation of the Earley-based T&M-formalisms for adaptable processing interactions Diana MICUSHA, The ASM Mathematics and Computer Science Institute, Chisinau, Republic of Moldova.....	558
• Discrete – Time Economic Model Gabriela MIRCEA, West University of Timișoara, Faculty of Economic Sciences, Departments of Economic Informatics, Timișoara.....	567

•	The optimal predictor mechanism of inflation. The optimal filter Kalman	
	Gheorghe OPRESCU, Dorin Mitră, Academy of Economics Studies,	
	Bucharest, Romania.....	571
•	Nonlinear Aspects For The Transportation Problem	
	Dorina MOANTA, Academy of Economic Studies, Bucharest, Romania	578
•	Mathematical Modelling For Optimal Investment Decisions	
	Constanța Zoie RADULESCU, Marius RADULESCU, Sorin RADULESCU,	
	Bucharest, Romania.....	581
•	Robust automatic classification	
	Emil STAN, Police Academy, Bucharest, Romania	587
•	The Elements Of Contracts In Symmetrical Information Conditions	
	Stelian STANCU, Department of Economic Cybernetics,	
	Academy of Economic Studies, Bucharest, Romania.....	592
•	Economics at a turning point	
	Christina SUCIU, Academy of Economic Studies Bucharest, Romania	606
•	An econometric approach to the impacts of Greek investment banks' long-term credit on financial growth, 1964-1997	
	George A. THANOS, Financial Management, Technological Educational Institution of Chalkis, Department of Economics,	
	Hellenic Air Force Academy, Athens, Greece.....	611
•	Choosing the Regression Function for Modeling the Social-Economic Facts	
	Ovidiu TĂNĂSOIU, Cristina TRANDAŞ	
	Academy of Economic Studies, Bucharest, Romania.....	620
•	Seasonal Time Series Forecasting Applied for the Unemployed and Unemployment Rate Analysis	
	Z. GOSCHIN, M. VĂTUI, Academy of Economics Study,	
	Bucharest, Romania.....	625
•	The Particularities of the Cluster Surveys and the Properties of the Specific Estimators	
	Vergil VOINEAGU, Constantin ANGHELACHE, Daniel Traian PELE	
	The Academy Of Economic Studies, Romania.....	635
•	Financial Models Involving the Use of Computers	
	Marius HERBEI, University of Timisoara, Faculty of Science Economics,	
	Carmen COVRIG	640
•	Computer simulated business model	
	Alexander Petkov PETKOV, University of Rousse, Department of "Business and management", Bulgaria.....	646

SECTION 5 – Software quality management

- **The Maintenance Of The Information Systems**
Gheorghe SABAU, Academy of Economic Studies, Bucharest, Romania,
Gica CRUCERU, Euro University Dragan, Brasov, Romania 652
- **Gestion de la qualite de service pour un environnement distribue**
Mathieu HERVE., F. BIENNIE, PRISMA – INSA de Lyon, France 658
- **The Informatics Project Evaluation**
Ion BOHĂLȚEANU, SC Petrom SA 668
- **Developing Internationalized Software by Usig Standard C++**
Dorin IRIMESCU, University “Politehnica” Of Bucharest,
Bucharest, Romania 672
- **Secure Web Access in an Environment of Mutual Distrust**
Jeff MORGAN, Howard MORRIS , Venky KRISHNAN,
Internet And Mobile Systems Laboratory, Hewlett-Packard Laboratories, USA
Anca-Andreea IVAN, Courant Institute Of Mathematical Sciences
New York University, New York, Usa 682
- **End-To-End Performance of Wide Area Applications Using Active
Names and Networks**
Madalina MLAK, Academy Of Economic Studies – Bucharest, Romania 692
- **Tools and Practices for Critical Information Asset Protection**
Virgil CHICHERNEA, Romanian-American University,
Alexandru TABUSCA, Balexpă S.R.L 701
- **Predictive Techniques in Image Compression/Decompression**
Catalina-Lucia COCIANU, Academy Of Economic Studies Bucharest,
Comp. Sci. Dept., Romania, Luminita STATE,
University Of Pitesti, Comp. Sci. Dept., Romania 708
- **Considerations Concerning the Efficiency of The
Systems of Knowledge Testing and Evaluating**
Ion COVALENCO, Anatol GODONOAGĂ
Academy Of Economic Studies, Chișinău, Republic Of Moldova 713
- **Tools for Evaluating the Software's Reliability**
Marian CRISTESCU,
Land Forces Academy "Nicolae Bălcescu", Sibiu, Romania 719
- **Secure Wap Transactions Using Set - Combining Mobility
with Reliable Cryptography**
Vlad PETRIC, Daniel DANCIU,
Computer Engineering Dept., Transilvania Univiersity, Brasov, Romania 729

- **Software Reliability using the Jelinski-Moranda Model**
Sabin GORON, Nicolae TOMAI "Babes Bolyai" University, Cluj Napoca ... 736
- **Procedures To Accredit The Electronic Public Notary**
IVAN Ion, Academy of Economic Studies, Bucharest, Romania..... 741
- **Some Social, Economical, Legal and Ethical Issues in Utilisation
of the Information and Communications Technology**
Stefan IANCU, Bucharest, Rumania 746
- **Criteria for evaluating the quality of health related sites on Internet**
Elena JITARU, Adriana ALEXANDRU,
National Institute for R&D in Informatics, Bucharest, Romania
Ioana MOISIL, Lucian Blaga University of Sibiu, Romania..... 751
- **Analysis and Assessment of the Data Quality Characteristics**
Otilia PARLOG, M.Ap.N. Bucharest, Romania..... 756
- **An Evolutionary Method for Test Data Generation**
Paul POCATILU, Bucharest, Romania
Teodor MIHAI, Limerick, Ireland..... 761
- **Software reliability estimation in uncertain situations**
Eng. Mihai POPESCU, Military Technical Academy, Bucharest, Romania... 765
- **Mis Development And Evaluation A Diagrammatic Overview**
Carina TOADER, Dumitru STÂRCEA
Camera de Conturi Gorj, Târgu Jiu, România 771
- **Importance of Human Factor in Software Ingineering**
Liviu LUNGULESCU, Florian IONITA
Ministry Of Defense, Bucharest, Romania 775
- **Metrics for Software Reuse**
Emilia STANCIU, Banc Post, Bucharest, Romania 782

SECTION 6 – Software Engineering

- **An Approach of the Minimum Flow Problem**
Laura CIUPALĂ, Eleonor CIUREA
University "Transilvania" of Brasov, Romania 786
- **Upon an integer allocation problem**
Claudiu VINTE, Goldman Sachs Ltd., Tokyo, Japan..... 791
- **Beowulf Clusters**
Razvan BOLOGA, Academy of Economic Studies, Bucharest, Romania..... 798

• The Method of the Informational Equations Dumitru BALANEL, Cooperative-Trade University	803
• Objects used by pointers in Delphi programming Silviu BÂRZĂ, Universitatea Spiru Haret, Bucharest, Romania	808
• Concepts-Models-Algorithms-Constraints-Data Processing - Systemic Solution or / and Non-Systemic Problem? Nicolae BULZ.....	813
• Bitmap Image Data Analysis Felix FURTUNĂ, Academy of Economic Studies Bucharest, Romania.....	819
• An Object-Oriented Specification of the Object-Oriented Analysis and Design Methods Dan JISA, Est-West Informatique Roumanie, Bucharest, Romania.....	825
• The resolution principle and Prolog language Adriana BARNOSCHI, Institutul de Management-Turism "EDEN", Bucuresti, Romania	830
• Towards an Integration of Business Process Modeling and Object-Oriented Software Development Peter LOOS, Peter FETTKE, Chemnitz University of Technology, Chemnitz, Germany.....	835
• Client-Server Database Applications Using Visual Programming Cornelia MUNTEAN, Faculty of Economic Studies, West University of Timisoara, Romania	844
• Parallel Algorithm to Solving the Option Pricing Equations of Financial Economics on a network of computers Adrian RABAIA, "OVIDIUS" University, Constantza, Romania	850
• Toward a Definition of Fuzzy Processes Lucian LUCA, Universitatea "Tibiscus", Timișoara, România Ioan DESPI, Universitatea de Vest, Timișoara, România	855
• Systolic Arrays Gheorghe DODESCU, Academy of Economic Studies, Bucharest, Romania	860
• Pareto Optimality of the Equilibrium of a Competitive Market Economy With Public Goods D. MARIN, FI. MAICAN, Faculty of Economic Cybernetics, Statistics and Informatics, Bucharest, Romania.....	865
• About Duals and Minors in Matroid Theory Laurențiu MODAN, Academy of Economic Studies, Bucharest, Romania	874
• On a special transportation problem Vasile NICĂ, Department of Economic Cybernetics, Academy of Economic Studies,Bucharest,Romania	878

• The Transformation Group 2d/3d In Graphics	
Ioan ODAGESCU, Academy of Economic Studies, Bucharest, Romania	883
• Workflow Document Management Model - Process Oriented Case Study –Export Sales Organization	
Gheorghe OGRINJA, Tofan Grup, Bucharest, Romania.....	892
• Paradigms for Language Specification by BNF Rules	
Emil M. POPA, Sibiu, Romania.....	902
• An Approach To Task Analysis For User Interface Design	
Costin PRIBEANU, National Institute for Research and Development in Informatics, Bucureşti, România,	
Jean VANDERDONCKT, Université catholique de Louvain, Louvain-la-Neuve, Belgium	907
• Parallel Numerical Solution of PDE arising from Finance	
Monica RABAEA, Marius DINU, "OVIDIUS" University, Constantza, Romania.....	912
• The 'Second Reader' Problem; Approach Based on Maximum Flow	
Sabin TABIRCA, University College Cork, Computer Science Department, Ireland,	
Tatiana TABIRCA, University of Manchester, Computer Science Department, England.....	917
• Using Dynamic Object Lists In Economic Applications Design	
Mihaela MUNTEAN, West University of Timisoara, Romania.....	921
• The Computerized Romanian Natural Language Processing Development: Projects & Perspectives	
Dumitru TODOROI, Academy of Economic Studies of Moldova, Chisinau, Republic of Moldova.....	927
• Some Considerations of Knowledge Representation using Frames and Semantic Nets	
Vasile PODARU, Bucharest, Romania	936
• Modeling the Multidimensional Information Systems	
Mihaela MUNTEAN, Academy of Economic Studies, Bucharest, Romania ..	942
• Trends in information system design and programming	
Vasile AVRAM, Academy of Economic Studies, Bucharest, Romania	
Diana AVRAM, Euro University Dragan, Lugoj, Romania	949
• System Engineering Programs And Projects Planing	
Gavril MALOS, Military Technical Academy, Bucharest	955
• The Management of Fuzzy Knowledge in Planning Systems	
Vasile MAZILESCU, Department of Accounting and Informatics Economics, University "Dunarea de Jos" Galati,	967

- **A Subclass Method Based On Minimizing the Cross-Entropy of The Distribution Functions**
Maria MIROIU,
University of Pitesti, Computer Science and Mathematics Department 978
- **Considerations regarding open-source software development for profit**
Marian ZAHARIA, Adriana POPA
"George Baritiu" University of Brasov, Romania 985

SECTION 7 – Software Intelligence

- **Methodologies For Development Of Intelligent Systems. A Survey on Achievements and Prospects**
Ioan ANDONE., Department of Economic Informatics,
„A.I.I.Cuza” University, Iași, Romania 990
- **Time Series Prediction with Backpropagation Neural Networks and Applications in Economics**
Marius BULACU, Department of Biophysics, Faculty of Physics,
University of Bucharest, Romania 995
- **Cooperation, Communication and Observation in Multi-Agent-Systems as Main Properties**
Alexandru CICORTAS, Faculty of Mathematics,
West University of Timisoara, Romania 1001
- **Analyzing Economical Performance of Central-East-European Countries Using Neural Networks and Cluster Analysis**
Adrian COSTEA, Antonina KLOPTCHENKO, Barbro BACK
Åbo Akademi University and Turku Centre for Computer Science (TUCS),
Turku, Finland 1006
- **Ontological Issues in a Multi-Agent System Supporting Business Process Reengineering**
Alexandra GALATESCU, National Institute for R&D in Informatics,
Bucharest , ROMANIA 1012
- **Automatic Map Labelling System using Genetic Algorithms**
Laur IVAN & Ryan CONOR, Dept. of Computer Science and Information Systems, University of Limerick, Ireland 1018
- **Genetic Evolution of Neural Networks for Automatic Construction of Economic Forecasting Models**
Klaus B. SCHEBESCH,
Department of Economics, University of Bremen, Germany 1027

• Using Neuronal and Genetic Algorithms to Project an Assembly Line	Carmen HARTULARI, Cybernetics Department, Academy of Economic Studies, Bucharest, Romania Rodica MIHALCA, Economic Informatics Department, Academy of Economic Studies, Bucharest, Romania.....	1034
• Information Technology-Neural Nets	Ioan NICOLAESCU, Military Technical Academy, Bucharest, Romania	1041
• Some Considerations on the Decision Support Systems Based on Multi-Agents	Rodica AVRAM- NIȚCHI, "Babeș-Bolyai" University, Cluj-Napoca, Romania.....	1046
• Distributed Expert Systems in Naval Operations	Gabriel RAICU, Constanta Maritime University, Romania	1052
• Evolutionary Scheduling for Software Projects	Iulian ÎNTORSUREANU, Department of Economic Informatics, Academy of Economic Studies, Bucharest, Romania.....	1063

SECTION 8 – Systems and Data Bases

• Software prototype for analysis and modelling of the information circuit and flow	Ioan BOLDEA, Claudiu BRÂNDĂȘ, University of the West Timișoara, Timișoara.....	1068
• Database Design GIS PROJECT	Catalin Stefan CAUTES "Constantin Brancoveanu" University, Braila, Romania.....	1073
• Using Free Software for web based database applications	Florin RADULESCU, Politehnica University Bucharest, Romania.....	1079
• Points of Intersection of Symmetrical Solutions	Pf Reaction-Diffusion Processes Panayiotis M. VLAMOS, Department of Mathematics, National Technical Univ. of Athens, Zografou Campus 15780.....	1084
• MBS: Mobile Broadband System	Andrei GIREADA, Maxim Software S.R.L Radu MANEA, ITC Networks S.R.L	1090
• Benefits of Data Warehouse Technology in Financial Accounting System Reengineering	Cristina IONIȚĂ, TLC GmbH, Bucharest, Romania	1106

• Client/server middleware: Solutions for Integration	1112
Victoria IORDAN, University of the West Timișoara, Romania.....	
• Refinement of Stream X-machine Specifications	1117
Florentin IPATE, Pitesti University, Pitesti, Romania	
• An Algorithm to Improve Query Evaluation Efficiency in Parallel Systems	
Dr. Engineer Georgios KAPENEKAS	
Technological Education Institute Halkida Greece	1126
• Data driven web pages using ASP+	
Cătălin Ioan MAICAN, Transilvania University of Brașov, Romania.....	1132
• Extension of UML over rule modeling	
Mariana MOCANU, University POLITEHNICA from Bucharest, Romania	
Vasile LUNGU, University POLITEHNICA from Bucharest, Romania	1137
• Numerical Computing in Java	
Bogdan OANCEA, "Artifex" University, Bucharest, Romania	1142
• A Cybernetic Approach To Technical System Design	
Ioan STATE, Romanian - Canadian University, Brasov, Romania.....	1148
• Voice over IP	
Adrian VASILESCU, Academy of Economic Studies, Bucharest, Romania	1153
• OOVMT Tools Limits in analyzing and designing Informatics Systems	
Gabriela VÎRLAN, University „Dunărea de Jos” Galatz, Accounting and Economic Informatics Department, Faculty of Economic Sciences and Administration, Galatz, România	1159
• New design test conditions for X- machines	
Tudor BĂLĂNESCU, Faculty of Sciences, University of Pitești, Romania ..	1164
• Recent results on Communicating X - Machine Systems	
Horia GEORGESCU, Faculty of Cybernetics, Statistics and Economic Informatics, Academy of Economic Studies, Bucharest, Romania	1172
Presenter of Papers	1173
Sponsors	1183