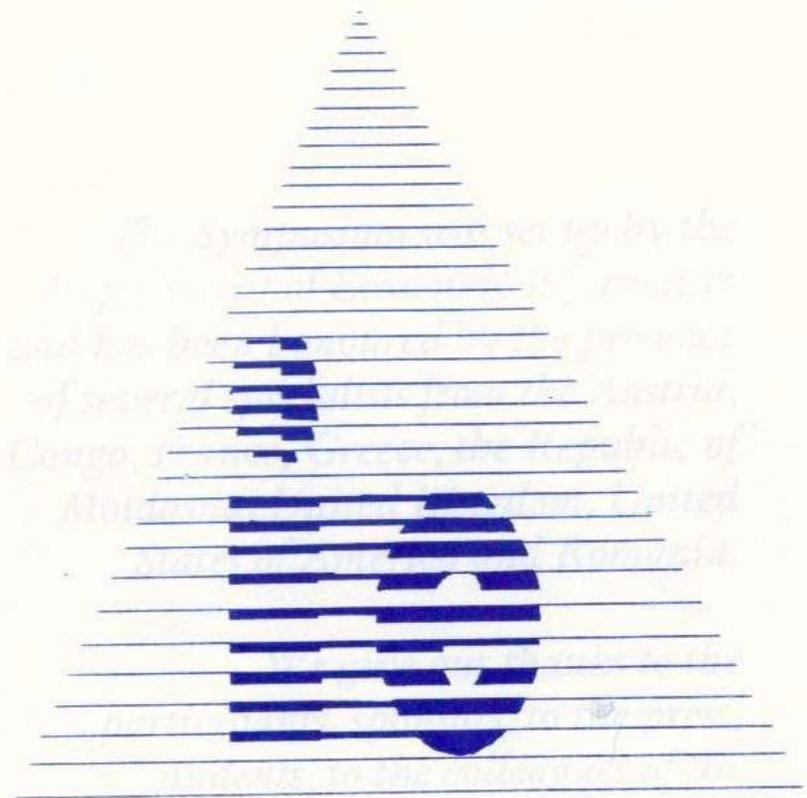




THE 3rd INTERNATIONAL SYMPOSIUM
ON ECONOMIC INFORMATICS
BUCHAREST
MAY 8-10, 1997

PROGRAM



**THE 3rd INTERNATIONAL SYMPOSIUM
ON ECONOMIC INFORMATICS
BUCHAREST
MAY 8-10, 1997**

PROGRAM

The Symposium was set up by the Department of Economic Informatics and has been honoured by the presence of several specialists from the Austria, Congo, France, Greece, the Republic of Moldavia, United Kingdom, United States of America 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.

**ACADEMY OF ECONOMIC STUDIES
FACULTY OF ECONOMIC
CYBERNETICS, STATISTICS
AND INFORMATICS
Economic Informatics Department**

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Section 1

Advanced Methods, Techniques and Instruments for Software and Informatics Systems Building

Chairman:
Ioan ODĂGESCU

Secretary:
Felix FURTUNĂ

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An example of building objects in a non object-oriented relational DBMS -
Vasile AVRAM, Ioan ODĂGESCU, Academy of Economic Studies,
Bucharest, Romania

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A data flow diagram based software engineering tool - Marian GHEORGHE, University of Bucharest, Romania, Peter RITCHIE, University of Central Lancashire, Preston PR1 2HE, U.K., Bogdan CRIVAT, Marius DUMITRU, Cristian VLAD, University of Bucharest, Romania

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Software Engineering - an overview - Doina ROȘCA, University of Craiova, Romania

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Present and Perspectives in the Object-Oriented Analysis and Design Methods; RO_CASE Experience - Dan CHIOREAN, Iulian OBER, Marian SCUTURICI, Dan Mircea SUCIU, Babes-Bolyai University, Cluj-Napoca, Romania

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VISUAL_PROJECT Open System for Visual Design of General Purpose Applications - Radu COMȘA, MICS Software SRL, Suceava, Romania

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Classes as Finite States Machines - Petru CURTICAPEAN, National Bank of Romania, Tg-Mureş Branch, Romania

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B R E A K

Chairman:
Horia GEORGESCU

Secretary:
Felix FURTUNĂ

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Informatic System for Broker Agencies - Daniel LUCA, Ioan ODĂGESCU, Academy of Economic Studies, Bucharest, Romania

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Schema Evolution Management for Object-Oriented Databases - Ioan DESPL, Alexandru CICORTAS, Victoria IORDAN, Computer Science Department, West University of Timisoara, Romania

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Specifying Synchronisation with Grammar Systems - Tudor BĂLĂNESCU, Horia GEORGESCU, Marian GHEORGHE, Faculty of Mathematics, University of Bucharest, Bucharest, Romania

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Object modeling technique - Traian IONESCU, Rhône-Poulenc, Bucharest, Romania

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L&R - Un système formel pour les deductions - Simion LĂSĂL, Université de Moldavie, Chişinău

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Benefits of CASE Technology in Information Systems Development - Gheorghe SABAU, Ion LUNGU, Cristina IONITA, Georgeta BADESCU, Academy of Economic Studies, Bucharest, Romania

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B R E A K

Chairman:
Ion SMEUREANU

Secretary:
Felix FURTUNĂ

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General software for database manipulation - A. M. MORAIT, Bucharest University, Physics Department, Romania

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The methods and instruments for elaboration of the flexible informatic systems - Gheorghe CAPATSINA, University of Kishinev, Moldavia

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Spatial data structures for image data retrieve - Ion SMEUREANU, Marian DĂRDALĂ, Academy of Economic Studies, Bucharest, Romania

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A PostScript to HP-GL Translator, Using the PostScript Interpreter - Ioan STOIANOV, Politehnica University of Timișoara, Romania

18⁰⁰ - 18¹⁵

L'analyse en composantes principales de tableaux de données par logiciels statistiques - Virgil VOINEAGU, Titus Felix FURTUNĂ, Academie des Etudes Economiques, Bucarest, Roumanie

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Raisonnement avec Contraintes - Un metainterpreteur et un traducteur pour la programmation en logique temporelle - Tiberiu STRATULAT, Cornelia STRATULAT, Academie des Etudes Economiques, Bucarest, Roumanie



Section 2

Standards, Protection and Software Quality

Chairman:
Gérard BEUCHOT

Secretary:
Marian DÂRDALĂ

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Software Cost Estimation - Paula APREUTESEI, IDG, Bucharest, Romania
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Réseaux et sûreté des communications - Gérard BEUCHOT, INSA Département Informatique - Laboratoire GRACIMP, Lyon, France
- 9³⁰ - 9⁴⁵
Software complexity-productivity correlation - Romulus ARHIRE, Softplus S.R.L., Bucharest, Romania
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Security audit of information systems - Gabriela AVRAM, AISTEDA - Alba Iulia, Romania
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The efficiency of the protection systems of the computers against viruses - Constantin BARON, Academy of Economic Studies, Bucharest, Romania
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L'évaluation de la qualité des systèmes informatiques - Tudor BRAGARU, A.S.E.M, Chisinau, Moldova
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Chairman:
Ion IVAN

Secretary:
Marian DÂRDALĂ

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Prototyping techniques - Sergiu COMAN, Bucharest, Romania
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Software reliability monitoring a quality characteristic during the whole life cycle - Ion IVAN, A.S.E., Bucharest Romania, Mihai POPESCU, Catalin STOIAN, A.T.M. Bucharest Romania, Panagiotis SINIOROS, National Technical University of Athens, Greece
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Software Quality Cost Structure - Otilia PÂRLOG, Gheorghe NOȘCA, National Defence Ministry, Romania
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Is software testing effective ? - Florentin IPATE, Universitatea Româno-Americană, București, România
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Objects quality characteristics - Ion IVAN, Economic Informatics Department ASE, Bucharest, Romania
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The reliability analysis of the program systems for the bookkeeping evidence of small and middle enterprises using the database facilities - Marian CRISTESCU, Academia Trupelor de Uscat "Nicolae Bălcescu", Sibiu, România
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Chairman:
Victor-Valeriu PATRICIU

Secretary:
Marian DÂRDALĂ

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Compared Analysis of Software Metrics - Alexandra KARANDINO, Athena, Greece
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Management of the investment activity based on use of applied software - Radu GAROFEANU, Societatea Energoconstrucția S.A., Timișoara, Romania
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A Software reliability estimation model - O. PÂRLOG, A. PÂRLOG, Gh. NOȘCA. National Defence Ministry, Bucharest, Romania
- 15⁴⁵ - 16⁰⁰
Cryptography and File Protection in Computer Networks - Victor-Valeriu PATRICIU, Ioan BICA, Military Technical Academy, Bucharest, Romania
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An Evaluation of the Level of Software Reuse - Emilia STANCIU, Banc Post, Bucharest, Romania
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The reliability data validation - Alexandru GHITA, Viorel IONESCU, Military Technical Academy, Bucharest, Romania



Section 3

Distributed and Parallel Processing, Open Systems

Chairman:
Gheorghe DODESCU

Secretary:
Carmen STANCIU

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Tehnologic solutions concerning computer network usage - I. BOLUN, R. MIGLIUC, A.S.E.M., Chisinau, Moldavia
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Transfer optimisation for calculation of relational expressions in parallel systems and distributed databases - Georgios KAPENEKAS, Technical Education Institute, Halkida, Greece
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Systolic arrays - The technology of parallel processing - Gheorghe DODESCU, Academy of Economics Studies, Bucharest, Romania
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Trends in the development of cooperative systems - Adrian DOMIDE, Mircea MIRESCU, Monica PARVAN, Research Institute for Informatics, Bucharest, Romania
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Handling WEB pages with CGI programs - Floarea NASTASE, Academy of Economic Studies, Bucharest, Romania
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Testing a nonlinear optimization algorithm on a parallel machine - Vincențiu DUMITRU, Florica LUBAN, Academy of Economic Studies, Bucharest, Romania

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Chairman:
Adrian VASILESCU

Secretary:
Carmen STANCIU

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Parallelism in Protocol Processing - Adrian VASILESCU, Academy of Economic Studies, Bucharest, Romania

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Parallel matrix algorithms - Nicolae CATANICIU, I.N.C.S.M.P.S., Bucharest, Romania

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Non locking schedulers for concurrency control in database systems - Georgios KAPENEKAS, Technical Education Institute, Halkida, Greece

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Array processors - Architecture for parallel processing - Mădălina RĂCEANU, Academy of Economic Studies, Bucharest, Romania

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A Brief comparaisn between java and risc microprocessors - Radu MĂRŞANU, Academy of Economic Studies, Bucharest, Romania

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Chairman:
Vladimir DUMITRESCU

Secretary:
Carmen STANCIU

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Modern characteristics of groupware - Mircea MIRESCU, Adrian DOMIDE, Monica PARVAN, Research Institute for Informatics, Bucharest, Romania

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Clustering Computing - An Alternative to Supercomputers - Vladimir DUMITRESCU, Octavian PAIU, Iuliana GOGANAU, Academy of Economic Studies, Bucharest, Romania

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Network Management Protocols - Florin PILAT, Carmen STANCIU, Academy of Economic Studies, Bucharest, Romania

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A Model for Parallel Discrete Event Simulation - Victoria IORDAN, Alexandru CICORTAŞ, Ioan DESPI, Faculty of Mathematics, West University of Timișoara, Romania



Section 4

Informatics Systems for Public and Home Services, with Graphic / Multimedia Interfaces

Chairman:
Jean Marie PINON

Secretary:
Manole VELICANU

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Electronic Documentation of the Statistical Operations: A French-Romanian Experience - Dominique CROSNIER, INSEE, France, Liana MARINA, NCS, Romania

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Modele de representation et de recherche d'information pour les systemes documentaires repartis - Sylvie CALABRETTO, Béatrice RUMPLER, Jean-Marie PINON, LISI - INSA de Lyon, France

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The influence of teleworking computing systems on a transition economy - Augustin MAN, Applied Computing Science Center, Cluj, Romania

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StreamWorks and its Multimedia Applications - Ioun ROXIN, GRACIMP, INSA de Lyon, France, Nabil AKROUT, Xing Technologies Corporation, USA

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Hypermedia systems for informations presentation - Cristina DAN, Research Institute for Informatics, Bucharest, Romania

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From the OS-SHELL to the Multimedia-NPL Communications - D. MICUSHA, N. DRUCIOC, D. TODOROI, IM ASM, ASEM, Chişinău, Moldavia

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Chairman:
Daniel LUCA

Secretary:
Manole VELICANU

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Modelling Multimedia Presentations - Georgeta DRULA, Bucharest University, Romania

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Commerce and Marketing in Hypermedia - Bogdan ONETE, Daniel LUCA, Academy of Economic Studies, Bucharest, Romania

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Methods and Techniques for the Design and implementation of Consistent Human-Computer Interfaces - Costin PRIBEANU, Research Institute for Informatics, Bucharest, Romania

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Methodes de conception des projets de communication mediatisee par ordinateur - Sophie M. DELOUIS, Laboratoire GRACIMP - INSA de Lyon, France

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One Pixel Based Techniques for Image Enhancement - Catalina COCIANU, Academy of Economic Studies, Bucharest, Romania

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Image Compression with Genetic Algorithms - Laur IVAN, Academy of Economic Studies, Bucharest, Romania

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B R E A K

Chairman:
Ion LUNGU

Secretary:
Manole VELICANU

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The Implementation of Logical Operators on Vectorial Represented Plane Figures - Ioan STOIANOV, Victor-Eugen DRAGAN, Politehnica University of Timisoara, Romania

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Introduction to Project Based Financial Management Techniques - Hugues LECOUCHE, Bull Information Systems Limited, Hemel Hempstead, United Kingdom

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Public services' privatisation modelling - Sorin ALBULESCU, Bucharest, Romania

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Finance information system - Clotaire Jonas INGAUTA, Congo

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Some remarks about heterogeneous business information management systems (HBIMS) - M.VASRHELYI, Rutgers State University of New Jersey, U.S.A., Ş.I. NIŢCHI, "Babeş-Bolyai" University Cluj, Romania



Section 5

Informatics Systems for Computer Aided Decision in Economics and Administration

Chairman:
Frederique BIENNIER

Secretary:
Floarea NĂSTASE

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Introduction in the classification of errors in the economy - Ludovic TÖVISSI, Andrei TUDOREL, Academie of Economic Studies, Bucharest, Romania

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La determination des informations économiques - Nicolae APOPEL, Constantin APOSTOL, Academie d'Études Économiques, Bucarest, Roumanie

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The Software "Registrul Hirtilor De Valoare" (Rhv - 2.01) - George BACKA, Economic Bank, Chisinau, Tudor BRAGARU, Academy of Economic Studies of Moldova, Chisinau

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The relationship between the monopoly price and the socially optimal price in the presence of consumption diseconomies - Adrian BĂDESCU, Academy of Economic Studies, Bucharest, Romania

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L'entreprise virtuelle Besoins techniques et organisationnels - Yamina ZELLOUF, Frederique BIENNIER, Joël FAVREL, INSA Lyon, France

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Computer system of state administration Republic Moldova - achievements and developing prospects - Pavel CHIREV, Republican Centre of Informatics, Chisinau, Republica Moldova, Tamara ZACON, Academy of Economics of Moldova, Chisinau, Republica Moldova

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Chairman:

Alain CARDON

Secretary:

Floarea NĂSTASE

15⁰⁰ - 15¹⁵

Un Système d'Information adaptatif prenant en compte l'intention des acteurs : une modélisation par Agents dynamiques - Alain CARDON, Stéphane DURAND, Lir-INSA Rouen, Mont Saint Aignan, France

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GRAPHCEL: a computer soft tool for the financial blocking problem - Ioan DUMITRU, College I.L.Caragiale, Vincentiu DUMITRU, Academy of Economic Studies, Bucharest, Romania

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Utilisation des Systèmes Multi-Agents dans la modélisation des systèmes adaptatifs - Stéphane DURAND, Franck LESAGE, Claude MOULIN, INSA Rouen, Mont Saint Aignan, France

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New paradigms of the Stock Exchange - Bogdan GHILIC-MICU, Academy of Economic Studies, Bucharest, Romania

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Optimal investment in human capital under risk and uncertainty - Christina SUCIU, Cornel TĂRHOACĂ, Cătălin HUIDUMAC, Academy of Economic Studies, Bucharest, Romania

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Tendances et directions generales d'evolution des performances des systemes informatiques economiques (S.I.E.) - Tudor LEAHU, Universite Cooperatiste-Commercial de Moldova, Chisinau, Moldova

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B R E A K

Chairman:

Gheorghe SABĂU

Secretary:

Floarea NĂSTASE

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Models of estimation for software system release time - Dorin LIXANDROIU, TRANSILVANIA University of Brasov, Romania

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The Management of Information Project - Gheorghe SABAU, Cristina IONITA, Academy of Economic Studies, Bucharest, Romania

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FUZZYVAL-A Decision Support System for Multi-Attribute Decision Making Based on Fuzzy Approach - Maria MOISE, Research Institute for Informatics, Bucharest, Romania

17⁴⁵ - 18⁰⁰

Romanian Industrial Competitiveness Using Input-Output Analyses - Stefan RAGALIE, Institutul de economie industrială, Bucuresti, Romania, Viorel GAFTEA, Regia Autonoma de electricitate, Bucuresti, Romania

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Pascal Programs Library for Matrix Calculation Used in Marketing Research - Dana MIHALACHE, Academy of Economic Studies, Dumitru MIHALACHE, Ed. Romanul, Bucharest, Romania

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Evaluation of Bankruptcy Risk of Firms by using Rough Set Theory - Maria MOISE, Stefan ELIAN, Research Institute for Informatics, Bucharest, Romania



Section 5
**Informatics Systems for Computer Aided
Decision in Economics and Administration**

Chairman:
Bogdan GHILIC-MICU

Secretary:
Floarea NĂSTASE

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An advanced modelling language for dss in continuous process plants
- Cornel RESTEANU, Florin - Gheorghe FILIP, Sorin STANESCU, Research Institute for Informatics, Bucharest, Romania

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The Informational System for Bussines Managment In The Duty - Free Zones - Traian SURCEL, Academy of Economic Studies, Bucharest, Romania

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GIS Application in Archaeology - Claudiu VARCALIN, Oana TRUICA, Research Institute for Informatics, Bucharest, Romania

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Informatic system for final energy demand simulation in industrial sector
- Adina UȚĂ, Academy of Economic Studies, Bucharest, Romania

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National Geographical System for Archaeology: Archaeological Sites from Dobrogea-Braila Area - Claudiu VARCALIN, Radu Constantin GOGU, Constantin HAITA, Ana-Maria DEICA, Liviu TURCU, Research Institute for Informatics, Bucharest, Romania

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Computer system audit - managerial instrument of informatic risks
- Tamara ZACON, Academy of Economics of Moldova, Chisinau, Republica Moldova



Section 6
**Searching in Solution Space, Genetic
Algorithms and Neural Networks**

Chairman:
Csaba FABIAN

Secretary:
Adina UȚĂ

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The robustness of a model - Tudorei ANDREI, Miruna MAZURENCU, Academy of Economic Studies, Bucharest, Romania

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Prototyping rule-based expert systems in prolog - Costin BĂDICĂ, Amelia BĂDICĂ, University of Craiova, A.I.Cuza, Craiova, Romania

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Parallel Algorithms for Neural Networks - Anton CRETU, Constanta BODEA, Academy of Economic Studies, Bucharest, Romania

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The use of cramér-pearson deviation in generating data
- Fevronia BULACU, Academy of Economic Studies, Bucharest, Romania, Vasile PREDA, University of Bucharest, Bucharest, Romania

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Genetic Algorithm for The Open Shop Problem - Doina CARP, Institutul de Marina Civila, Constanța, Romania

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A Multi - product spatial equilibrium model - Tudor DUMITRESCU, Gheorghe RUXANDA, Academy of Economic Studies, Bucharest, Romania

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B R E A K

Chairman:
Dan RACOVITAN

Secretary:
Adina UȚĂ

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Evolutionary job shop scheduling - Csaba FABIAN, Academy of Economic Studies, Bucharest, Romania

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Applications of neural networks to some ecological phenomena forecasting - Laurentiu LEUSTEAN, Research Institute for Informatics, Bucharest, Romania

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Use of neural networks in a flexible assembly line system - Rodica MIHALCA, Carmen HARTULARI, Academy of Economic Studies, Bucharest, Romania

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Evolution algorithms for transportation problems - Dorina MOANȚĂ, Academy of Economic Studies, Bucharest, Romania

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Some remarks about the design of fuzzy based intelligent systems in uncertain economic environments - Stefan NIȚCHI, Dan RACOVITAN, Rodica AVRAM-NIȚCHI, M.VANCEA, S.BERAR, Babes-Bolyai University, Cluj, Romania

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On the Use of Energy Minimization Methods in Pattern Recognition Systems - Mihaela M. OPREA, University "Petroleum-Gas" Ploiesti, Romania

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BREAK

Chairman:
Rodica MIHALCA

Secretary:
Adina UȚĂ

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Optimal decision in the selection of portfolio problem - Constanta Zoie RADULESCU, Research Institute for Informatics, Bucharest, Romania, Marius RADULESCU, Sorin RADULESCU, Centre of Mathematical, Bucharest, Romania

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Un modele de dezechilibre dans une economie fermee - Marin DUMITRU, Monica ROMAN, Mihai ROMAN, Academie D'Etudes Economiques, Bucharest, Romania

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Sur le modèle mathématique des horaires scolaires et universitaires - Werner SCHATZ, Comission Nationale pour Statistique, Bucharest, Romania

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Using fuzzy sets in solving optimization problems - Mircea SULARIA, Research Institute for Informatics, Bucharest, Romania

18⁰⁰ - 18¹⁵

An interpretation of the regression technique - Gheorghe RUXANDA, Academy of Economic Studies, Bucharest, Romania

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Complexity of scheduling problems and automatic classification - Sigrid KNUST, Osnabrücken University, Germany



Section 7 Computer Aided Learning

Chairman:
Constantin APOSTOL

Secretary:
Anton CREȚU

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Pedagogical principles for training in the computerized office work area (especially for, but not confined to, adult personnel training) - Eugenia ALDICA, C.P.I., Bucharest, Romania
- 11¹⁵ - 11³⁰
Training in the computer network field - Nicoleta CALOIAN, C.P.I., Bucharest, Romania
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Informatics Terminology - Ileana CONSTANTINESCU, Academy of Economic Studies, Bucharest, Romania
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La projection des interfaces d'instruction MULTIMEDIA par l'application de la méthode PAC (Présentation, Abstraction, Contrôle) - Emil COSMA, Gheorghe BACANU, Université "TRANSILVANIA" de Brasov, Roumanie
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A probabilistic approach of the traditional systems of testing and evaluation of the knowledge - Ion COVALENCO, Anatol GODONOAGA, Ion LINGA, Adrian CIUDIN, Academy of Economic Studies, Chisinau, Moldova

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Virtual school: Utopia or reality? - Angela IONITA, Anamaria DOMSA, Mirela GASPARG, Research Institute for Informatics, Bucharest, Romania, Gabriel VICOVEANU, Gheorghe JUMUGA, Computer Publishing Centre (CPC), Bucharest, Romania

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Chairman:
Dumitru TODOROI

Secretary:
Anton CREȚU

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Virtual school: telepresence classroom - Mihaela DULIPOVICI, Remus TUDORICA, Training Centre in Informatics, Bucharest, Romania
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Section 8
Informatics Technologies in Order to
Increase the Efficiency of Working Processes

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