

CSIT'2015

Proceedings of the 17th International Workshop on

Computer Science and Information Technologies

Rome, Italy
September 22 - 26, 2015

Programme

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Viacheslav Wolfengagen	JurInfoR-MSU Institute, Moscow, Russia
Hongwei Zhang	Sheffield Hallam University, UK
Chrysostomos Stylios	Technological Educational Institute of Epirus, Greece

Tuesday, 22 September

10:00 – 11:00 Registration

11:00 – 11:30 Opening Ceremony of Workshop

Chairwoman Prof. N. I. Yusupova, Prof. A. Panconesi

Welcome word

Prof. N. I. Yusupova

Prof. A. Panconesi

Prof. G. Kovács

Prof. H. Woern

Prof. L. Massel

Prof. M. Guzairov

11:30 – 12:00 Coffee Break

12:00 – 14:00 Plenary session of Workshop

Co-chairs: Prof. Massini A., Prof. Yusupova N. I.

14.00 – 15.00 Lunch

15.00 – 16.00 Plenary session of Workshop

Co-chairs: Prof. H. Woern, Prof. Vasilyev V.I.

17.00 – 19.00 Bus tour Rome

Wednesday, 23 September

Workshop

10:00 – 11:30 Research session 1 «Control and IT in Technical and Educational Systems»

Co-chairs: Prof. Woern H., Prof. Massel L.V.

11:30 – 12:00 Coffee Break

12:00 – 14:00 Research session 2 «Conceptual Modeling and Decision Support Systems»

Co-chairs: Prof. Kovács G. L., Prof. Martynov V.V.

14.00 – 15.00 Lunch

**15:00 – 16:00 Round Table «Conceptual Modeling and Decision Support Systems»,
«Control and IT in Technical and Educational Systems»**

Co-chairs: Prof. Massel L.V., Dr. Kurennov D.V.

Assistant: Popkova E. E.

17.00 – 19.00 Walk tour Rome

Thursday, 24 September

Workshop

10:00 – 12:00 Research session 3 «Information Security Systems and Safety»

Co-chairs: Prof. Frid A.I., Prof. Mashkina I.V.

12.00 – 13.00 Round table «Erasmus MULTIC»

Co-chairs: Prof. Trevizan I., Prof. Yusupova N.I.

Assistant: Klimova A. V.

12:00 – 14:00 Research session 4 «Industrial Information Systems»

Co-chairs: Prof. Petunin A.A., Prof. Nugaev I.F.

14:00 – 15:00 Lunch

15:00 – 15:30 Round Table «Information Security Systems and Safety», «Industrial Information Systems»

Co-chairs: Prof. Petunin A.A., Prof. Vasilyev V.I.

Assistant: Malakhova A.I.

15.30 – 16.00 Closing Ceremony

Chairwoman Prof. Yusupova N. I.

Tuesday, 22 September

10:00 – 11:00 Registration

11:00 – 11:30 Opening Ceremony

Chairwoman Prof. Yusupova N. I., Prof. A. Panconesi

Welcome word

Prof. N. I. Yusupova

Prof. A. Panconesi

Prof. G. Kovács

Prof. H. Woern

Prof. L. Massel

Prof. M. Guzairov

11:30 – 12:00 Coffee Break

12:00 – 14:00 Plenary session

Co-chairs: Prof. Massini A., Prof. Yusupova N. I.

EDUCATIONAL PROGRAMME AT THE COMPUTER SCIENCE DEPARTMENT OF SAPIENZA UNIVERSITY OF ROME

Parisi Presicce F. (Sapienza University of Rome, Rome, Italy)

COGNITION GUIDANCE IN ROBOTICS AND SURGERY

Wörn H. (Institute for Process Control and Robotics, Karlsruhe Institute of Technology, Karlsruhe, Germany)

SOME REMARKS ON DIGITAL PRODUCTION

Kovács. G.L. (Computer and Automation Institute & University of Pécs, Budapest, Hungary)

PRESENTATION OF THE UNIVERSITY OF TRENTO AND THE RESEARCH PROGRAMS OF THE DEPARTMENT OF ECONOMICS AND MANAGEMENT

Trevizan I. (University of Trento, Trento, Italy)

14.00 – 15.00 Lunch

15:00 – 16:00 Plenary session

Co-chairs: Prof. H. Woern, Prof. Vasilyev V.I.

SEMIOTIC APPROACH TO DEVELOPMENT OF INTELLIGENT SYSTEMS OF CONTINGENCY MANAGEMENT IN ENERGY SECTOR

Massel L.V., Massel A.G. (Melentiev Energy Systems Institute of Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia)

A MATHEMATICAL MODELS OF TOOL PATH PROBLEM FOR CNC CUTTING MACHINES

Petunin A.A. (Ural Federal University, Yekaterinburg, Russia)

Wednesday, 23 September

10:00 – 11:30 Research session 1 «Control and IT in Technical and Educational Systems»

Co-chairs: Prof. Woern H., Prof. Massel L.V.

THE TECHNOLOGY OF ONTOLOGICAL ANALYSIS IN EDUCATIONAL ACTIVITIES

Martynov V.V., Filsova E., Sharonova J., Shiryayev O. (Ufa State Aviation Technical University, Ufa, Russia)

RESEARCH PROBLEM OF A ROBUSTNESS OF ELECTRONIC SCHEMES BY METHODS OF INTERVAL CALCULATIONS IN THE CONDITIONS OF UNCERTAINTY

Bondarev A.V., Anischenko V.A. (Orenburg State University, Kumertau branch, Kumertau, Russia)

TECHNO-ECONOMIC EFFICIENCY OF THE AUTOMATED CONTROL SYSTEM OF HEAT MATERIALS BASED ON A MULTIPLE LOGIC ADJUSTERS

Sazonova T.V., Anischenko V.A. (Orenburg State University, Kumertau branch, Kumertau, Russia)

ON ONE GREEDY ALGORITHM FOR GTSP WITH ENGINEERING SPECIFICS

Chentsov P.A. (Ural Federal University, Yekaterinburg, Russia)

EDUCATIONAL METHODOLOGICAL COMPLEX DEVELOPMENT SUPPORT SYSTEM

Martynov V.V., **Zaytseva A.A.** (Ufa State Aviation Technical University, Ufa, Russia)

RISK MODELING IN MEDICAL DIAGNOSTIC PROCESS

Buharbaeva L.Ya., Frants M.V., Egorova J.V. (Ufa State Aviation Technical University, Ufa, Russia)

THE MODELS OF DATA MINING THE COMPONENTS OF FIXED AND WORKING CAPITAL OF ENTERPRISES OF THE ECONOMY REAL SECTOR

Ilyasov B.G., Makarova E.A., Degtjareva I.V., Eftonova T.A. (Ufa State Aviation Technical University, Ufa, Russia)

OPTIMIZATION MODELING OF CALL-CENTRE

Ismagilova L.A., Buharbaeva L.Ya., Frants M.V., Egorova J.V. (Ufa State Aviation Technical University, Ufa, Russia)

ABOUT ONE METHOD OF COLLECTION FINANCIAL FLOWS ESTIMATION

1 - Maximenko Z.V., Rozanova L.F., Fedorova K.A., 2 - Askarova A.A. (1 - Ufa State Aviation Technical University, Ufa, Russia, 2 - Ufa Branch Office of SOGAZ Insurance Group Ufa, Russia)

SUPPORT FOR DECISION MAKING IN THE EVALUATION OF EDUCATIONAL SCIENTIFIC-TECHNICAL WORKS ON THE BASIS OF MULTIFUNCTIONAL AUTOMATED ANALYSIS OF TEXT DOCUMENT

Minasova N.S., Tarkhov S.V. (Ufa State Aviation Technical University, Ufa, Russia)

THE USE OF CLOUD COMPUTING IN EDUCATION

Ziangirova L.F. (Bashkir State Pedagogical University named after M. Akmullah, Ufa, Russia)

11:30 – 12:00 Coffee Break

12:00 – 14:00 Research session 2 «Conceptual Modeling and Decision Support Systems»

Co-chairs: Prof. Kovács G. L., Prof. Martynov V.V.

TECHNOLOGIES OF VISUALIZATION FOR CULTURAL AND HISTORICAL OBJECTS

Zakharova G.B., Petunin A.A., Krivonogov A.I. (Ural Federal University, Yekaterinburg, Russia)

THE INFORMATION INDICATOR AND MEASURING KEY IS FOR ADAPTED ERP PRODUCTION SYSTEM

Kulikov G.G. (Ufa State Aviation Technical University, Ufa, Russia)

A HYBRID CASE-BASED REASONING ALGORITHM FOR GROUP DECISION MAKING SUPPORT

Chernyakhovskaya L.R., Mulyukov R.R., **Malakhova A.I.** (Ufa State Aviation Technical University, Ufa, Russia)

INFORMATION SUPPORT OF DECISION SUPPORT FOR THE EXECUTIVE AUTHORITIES OF THE REPUBLIC OF BASHKORTOSTAN ON THE BASIS OF THE GIS TECHNOLOGY

Khristodulo O.I. (Ufa State Aviation Technical University, Ufa, Russia)

ESTIMATION EFFICIENCY OF THE APPROACH TO MANAGEMENT EDUCATIONAL ROUTE WITHIN ACADEMIC MOBILITY WITH USING INTELLIGENT DSS

Yusupova N.I., Smetanina O.N., **Klimova A.V.** (Ufa State Aviation Technical University, Ufa, Russia)

THE OPERATIVE ASSIGNMENT OF THE PURPOSE IN THE ANTHROPOCENTRAL OBJECTS WITH POSITIONS OF THE MODEL "ETAP".II

Fedunov B.E., Zheltov C.Yu. (FGUP GOSNIIAS (State Research Institute of Aviation Systems), Moscow, Russia)

APPLICATION OF SEMANTIC MODELLING AND PORTAL TECHNOLOGIES IN EDUCATION

Popkova E.E., Malakhova A.I., Oleinik J.A. (Ufa State Aviation Technical University, Ufa, Russia)

DEVELOPMENT OF AUTOMATED INTELLIGENT NETWORKING EXPERT SYSTEM [AINES]

Davletbaev A.S., Startcev Y.V., Kulikov G.G. (Ufa State Aviation Technical University, Ufa, Russia)

THE CONCEPTUAL MODEL OF CONFIGURABLE INFORMATION SYSTEM ON THE BASE OF NOSQL TECHNOLOGY

Rogozov Y.I. (Southern Federal University, Taganrog, Russia)

MULTIDIMENSIONAL PROCESSES OF KNOWLEDGE EXCHANGE IN THE SCIENTIFIC SCHOOL

Ilyasov B.G., Karamzina A.G., Fazletdinova I.R. (Ufa State Aviation Technical University, Ufa, Russia)

FUZZY CONTROL CLASSICAL THEORY IN THE CONTEXT OF DEFUZZIFICATION METHODS

1 - Sagdatullin A.M., 2 - Muravyova E.A., Kayasheva G.A. (1 - FSBEI HPE «Almetyevsk State Petroleum Institute», Almetyevsk, Russia, 2 - FSBEI HPE «Ufa State Aviation Technical University», Ufa, Russia, FSBEI HPE «Ufa State Petroleum Technological University», branch in Sterlitamak, Sterlitamak, Russia)

SYNTHESIS OF SECOND ORDER FUZZY CONTROLLER

1 - Solovev K.A., Kayasheva G.A., 2 - Soloveva O.I., 3 - Muravyova E.A. (1 - Ufa State Aviation Technical University, Ishimbay branch, Ishimbay, Russia, 2 - Ufa State Petroleum Technological University, Salavat branch, Salavat, Russia, 3 - Ufa State Petroleum Technological University, Sterlitamak branch, Sterlitamak, Russia)

MULTIVARIABLE CONTROL SYSTEM WITH A REGULATOR BASED ON HYBRID LOGIC ALGORITHMS

Ilyasov B.G., Saitova G.A., Sabitov I.I. (Ufa State Aviation Technical University, Ufa, Russia)

14.00–15.00 Lunch

15:00 - 16:00 Round Table «Conceptual Modeling and Decision Support Systems», «Control and IT in Technical and Educational Systems»

Co-chairs: Prof. Massel L.V., Dr. Kurennov D.V.

Assistant: Popkova E. E.

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Sazonova T.V. (Orenburg State University, Kumertau branch, Kumertau, Russia)

Chentsov P.A. (Ural Federal University, Yekaterinburg, Russia)

Zakharova G.B. (Ural Federal University, Yekaterinburg, Russia)

Klimova A.V. (Ufa State Aviation Technical University, Ufa, Russia)

Malakhova A.I. (Ufa State Aviation Technical University, Ufa, Russia)

17.00–19.00 Walk tour Rome

Thursday, 24 September

10:00 – 12:00 Research session 3 «Information Security Systems and Safety»

Co-chairs: Prof. Frid A.I., Prof. Mashkina I.V.

INTELLIGENT DECISION SUPPORT FOR RISK ASSESSMENT OF PERSONAL DATA

Sagitova V.V., **Vasilyev V.I.** (Ufa State Aviation Technical University, Ufa, Russia)

CYBER SECURITY OF RUSSIA'S ENERGY INFRASTRUCTURE, IT'S CURRENT STATE AND PROPOSED ACTIVITIES FOR SITUATION IMPROVING

Massel L.V., **Massel A.G.** (Melentiev Energy Systems Institute of Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia)

INTELLECTUAL COLLECTIVE EXPERT ENVIRONMENT FOR SUPPORT OF RESEARCH IN THE ENERGY SECTOR

Kopaygorodsky A.N. (Melentiev Energy Systems Institute SB RAS, Irkutsk, Russia)

SECURITY ANALYSIS OF ENTERPRISE NETWORK VIRTUALIZATION SEGMENT

Tuliganova L., **Mashkina I.**, Guzairov M.B. (Ufa State Aviation Technical University, Ufa, Russia)

A 3D FACE RECOGNITION METHOD BASED ON A MODIFIED FAST SCALING ICP USING MULTISENSORY BIOMETRIC DATA

Vokhmintsev A.V. (Chelyabinsk State University, Chelyabinsk, Russia)

EMPOWERING INFORMATION SECURITY SYSTEMS IN THE CONDITIONS OF DOMAIN ENVIRONMENT

Petunin S.A., Konyshchev A.V., **Vorontsov A.G.** (VNIIA, Moscow, Russia)

OBJECT-ORIENTED DATABASE ORGANIZATION IN SIMULATION STUDIES ON RUSSIA'S ENERGY SECURITY

Beresneva N.M. (Energy Systems Institute Siberian Branch of Russian Academy of Science, Irkutsk, Russia)

12:00 – 13:00 Round table «Erasmus MULTIC»

Co-chairs: Prof. Trevizan I., Prof. Yusupova N.I.

Assistant: Klimova A. V.

Guzairov M.B. (Ufa State Aviation Technical University, Ufa, Russia)

Yusupova N.I. (Ufa State Aviation Technical University, Ufa, Russia)

Tronci E. (Sapienza University of Rome, Rome, Italy)

Trevizan I. (University of Trento, Trento, Italy)

Gaglione G. (Sapienza University of Rome, Rome, Italy)

Massel L.V. (Melentiev Energy Systems Institute SB RAS, Irkutsk, Russia)

Massel A.G. (Melentiev Energy Systems Institute SB RAS, Irkutsk, Russia)

Kopaygorodsky A.N. (Melentiev Energy Systems Institute SB RAS, Irkutsk, Russia)

Alimgizhin V., Markelova M. Pashchenko I. (Former scholarship holder)

12:00 – 14:00 Research session 4 «Industrial Information Systems»

Co-chairs: Prof. Petunin A.A., Prof. Nugaev I.F.

GEOPORTAL "ENVIRONMENTAL STUDIES OF THE SOUTHERN SEAS OF RUSSIA"
Arkhipova O.E. (Institute of Arid zone of the Southern Scientific Center of Russian Academy of Sciences, Rostov-on-Don, Russia)

ORGANIZING UNDERSTANDING IN THE FRAMEWORK OF ERGATIC SYSTEM
Bel'tukov A.P., Maslov S.G. (Udmurt State University, Izhevsk, Russia)

ADAPTIVE GAS TURBINE ENGINE TEMPERATURE MEASURING INSTRUMENT WITH MODEL ERROR CORRECTION
Frid A.I., Petunin V.I., Sibagatullin R.R. (Ufa State Aviation Technical University, Ufa, Russia)

WORKLOAD CHARACTERIZATION AND ANALYSIS FOR INDUSTRY SUPERCOMPUTER MANAGEMENT
Petunin S.A., Novikov A.B., Ivanov K.A., Vorontsov A.G. (VNIIA, Moscow, Russia)

OPTIMAL CONTROL OF OIL EXTRACTION PROCESS ON THE BASIS OF COORDINATION PRINCIPLE
Nugaev I.F., Vasilyev V.I. (Ufa State Aviation Technical University, Ufa, Russia)

PROCESS APPROACH TO PRODUCTION OF PRECISION DEVICES WITH APPLICATION OF CAD-CAM-CAE SYSTEMS
Sklyarova N.S. (Ural Federal University, Yekaterinburg, Russia)

CONVECTIVE STABILITY OF MOTION OF A FLUID WITH A SOLID PARTICLES
Dementev O.N. (Chelyabinsk State University, Chelyabinsk, Russia)

METHODS OF OPTIMIZATION OF DIRECTIVE TECHNOLOGICAL PROCESSES AND CLUSTERING OF DETAILS OF AVIATION ENGINES
Selivanov S.G., Poezjalova S.N., Gavrilova O.A. (Ufa State Aviation Technical University, Ufa, Russia)

FRAMEWORK CAMCTO FOR GAS TURBINE ENGINES CONCEPTUAL DESIGN
Mikhaylov A.E., Krivosheev I.A., Akhmedzyanov D.A., Mikhaylova A.B. (Ufa State Aviation Technical University, Ufa, Russia)

OPTOELECTRONIC COMPUTER-AIDED "OPTEL" SYSTEMS FOR 3D MEASUREMENTS
Galiulin R.M., Barlybayev R.K. (Ufa State Aviation Technical University, Ufa, Russia)

14:00 – 15:00 Lunch

15:00 – 15:30 Round Table «Information Security Systems and Safety», «Industrial Information Systems»

Co-chairs: Prof. Petunin A.A., Prof. Vasilyev V.I.

Assistant: Malakhova A.I.

Vasilyev V.I. (Ufa State Aviation Technical University, Ufa, Russia)

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Vokhmintsev A.V. (Chelyabinsk State University, Chelyabinsk, Russia)

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Vorontsov A.G. (VNIIA, Moscow, Russia)

Sklyarova N.S. (Ural Federal University, Yekaterinburg, Russia)

15.30 – 16.00 Closing Ceremony

Chairwoman Prof. Yusupova N. I.