ACOMIN 2015 PRELIMINARY PROGRAM

November 10, 2015

9^{00}-9^{15}	**OPENNING CEREMONY** **Prof. Svetozar Margenov – Director of IICT-BAS** **Prof. Kostadin Kostadinov – Vise-Minister of Education and Science**
$9.^{15}$-$10.^{00}$	**OLEG ILIEV. PORE SCALE MODELING AND SIMULATION OF FLOW AND REACTIVE TRANSPORT ON 3D CT IMAGES (INVITED TALK)** **Session Chair: Svetozar Margenov**
$10.^{00}$-$10.^{20}$	**Coffee break**
	SESSION 1: ADVANCED COMPUTING **Session Chair: Oleg Iliev**
$10.^{20}$-$10.^{40}$	Ivan Dimov, Rayna Georgieva, Venelin Todorov. **Error analysis of biased stochastic algorithms for a class of integral equations**
$10.^{40}$-$11.^{00}$	Vlatko Nikolovski, Ivan Chorbev. **Cloud Based Patient Monitoring platform on Android smartphone sensors**
$11.^{00}$-$11.^{20}$	S. Stoykov, S. Margenov. **FEM Nonlinear Vibration Analysis of Plates**
$11.^{20}$-$11.^{40}$	Stanislav Harizanov. **Deblurring Poissonian Images via Multiple-Constraint Optimization**
$11.^{40}$-$12.^{00}$	Ivan Georgiev, S. Margenov, **Advanced computing applications based on micro CT data**
$12.^{00}$-12^{20}	Konstantinos Liolios, Vassilios Tsihrintzis, Krassimir Georgiev and Ivan Georgiev. **A Computational Investigation of the Optimal Reaction Type Concerning Bod Removal in Horizontal subsurface Flow Constructed Wetlands**
$12.^{20}$-12^{40}	Clemens Hofreither, Stefan Takacs, Walter Zulehner. **Robust Multigrid Methods in Isogeometric Analysis**
$12.^{40}$-$14.^{00}$	**Lunch**
$14.^{00}$-$14.^{45}$	**IOANNIS PAPAMICHAIL. FEEDBACK-BASED INTEGRATED MOTORWAY TRAFFIC FLOW CONTROL (INVITED TALK)** **Session Chair: Todor Stoilov**
$14.^{45}$-$15.^{00}$	**Coffee break**
	SESSION 2: OPTIMIZATION AND INTELLIGENT CONTROL **Session Chair: Ioannis Papamichail**
$15.^{00}$-$15.^{20}$	Ivan Kalaykov. **Control Problems in Ground-Level Power Supply System for Electrical Vehicles**
$15.^{20}$-$15.^{40}$	Todor Stoilov, K.Stoilova, V. Stoilova. **Bi-level Formalization of Urban Area Traffic Lights Control**
$15.^{40}$-$16.^{00}$	Stefka Fidanova. **Metaheuristic Method for Transport Modelling and Optimization**
$16.^{00}$-$16.^{20}$	V. Stoilova, E. Nikolov, N. Nikolova. **Density control of highway traffic using approached dimension of spatial distribution controller**
$16.^{20}$-$16.^{40}$	Kristina Jakimovska, Dimitar Karastoyanov, Nencho Nenov. **Approaches to control of railway vehicles in motion by predictive maintenance techniques**
$16.^{40}$-$17.^{00}$	Aleksey Balabanov. **Building of Numerically Effective Kalman Estimator Algorithm for Urban Transportation Network**

November 11, 2015

$9.^{00}$-$9.^{45}$	**JOHN DOMINGUE. DATA AND SEMANTIC TECHNOLOGIES FOR EDUCATION (INVITED TALK)** **Hall A. Session Chair: Galia Angelova**
$9.^{45}$-$10.^{00}$	**Coffee break**
	PARALLEL SESSIONS:

	SESSION 3: LANGUAGE AND SEMANTIC TECHNOLOGIES **Hall A. Session Chair: Christo Dichev**	**SESSION 4: OPTIMIZATION AND INTELLIGENT CONTROL** **Hall B. Session Chair: Ivan Kalaykov**
$10.^{00}$-$10.^{20}$	Ivelina Nikolova, Darina Dicheva, Gennady Agre, Zhivko Angelov, Galia Angelova, Christo Dichev, Darin Madjarov. **Emerging applications of educational data mining in Bulgaria: the case of UCHA.SE**	Dimitar Karastoyanov, Petar Bodurov, Todor Penchev. **Nails with an Innovative Shape for High Resistive (Resistant) Nailing in Extreme Conditions**
$10.^{20}$-$10.^{40}$	Petar Mitankin and Stoyan Mihov. **A new method for real-time lattice re-scoring in speech recognition**	Dimitar Karastoyanov, Ivan Yatchev, Iosko Balabozov. **Innovative Graphical Braille Screen for Visually Impaired People**
$10.^{40}$-$11.^{00}$	Jens Kohler, Adrian Fiech, Kiril Simov, Thomas Specht. **On The Performance Of Query Rewriting In Vertically Distributed Cloud Databases**	Stanislav Gyoshev, Todor Penchev. **Advanced Computing for High Speed Briquetting of Metal Chips and Powders**
$11.^{00}$-$11.^{20}$	Olga Kanishcheva, Galia Angelova. **About Tag Sense Disambiguation in Image Annotation**	Nikolay Stoimenov, Todor Penchev.. **Advanced Computing for Energy Efficiency of Milling Processes**
$11.^{20}$-$11.^{40}$	Svetla Boytcheva, Galia Angelova, Zhivko Angelov, Dimitar Tcharaktchiev. **Big Data Analytics in Healthcare – Temporal Clinical Events Patterns Mining**	Jovana Ruzic, Stanislav Gyoshev, Nikolay Stoimenov, Kristina Jakimovska, Aleksandar Vencl, Dimitar Karastoyanov. **Optimization and application of advanced laser nanoparticle sizer on wide range of materials**
$11.^{40}$-$12.^{00}$	Delyan Keremedchiev, Leoneed Kirilov, Todor Georgiev. **Multimedia Classroom Including Distance Learning Features**	Leoneed Kirilov, Vassil Guliashki, Krasimira Genova, Pasko Paskov. **An Interactive Method for Solving Multiple Objectives Flexible Job Shop Problems (MOFJSP)**
$12.^{00}$-$12.^{20}$	Milena Dobreva, Fernando Loizides. **Information Visualisation Skills: an Initial Investigation of Industrial Demand and Educational Supply**	Yasen Mitev, Leoneed Kirilov. **Improving the quality of the Email service by evaluating the KPI Efficiency**
$12.^{20}$-$12.^{40}$	Kiril Simov and Petya Osenova. **Knowledge Graph Extension for Word Sense Annotation**	Yuri Pavlov, Rumen Andreev. **Preferences and Modelling of the Complex System „Human-Process": a Machine Learning Approach**
$12.^{40}$-$14.^{00}$	**Lunch**	

14.⁰⁰-14.⁴⁵	**VIRGINIO CANTONI. INTERACTIVE, TANGIBLE AND MULTISENSORY TECHNOLOGY FOR A CULTURAL HERITAGE EXHIBITION: THE BATTLE OF PAVIA** **(INVITED TALK)** **Hall A. Session Chair: Dimo Dimov**	
14.⁴⁵-15.⁰⁰	**Coffee break**	
	PARALLEL SESSIONS:	
	SESSION 5: SIGNAL AND IMAGE PROCESSING: **Hall A. Session Chair: Virginio Cantoni**	**SESSION 6: ADVANCED COMPUTING** **Hall B. Session Chair: Krassimir Georgiev**
15.⁰⁰-15.²⁰	Petia Koprinkova-Hristova , Yurii Chirka, Volodimir Kudriashov, Kiril Alexiev, V. Ivanov. **Smart Feature Extraction from Acoustic Camera Multi-Sensor Measurements**	J. M. Sellier, I. Dimov. **Quantum Mechanics and Signed Particles, A New Formulation Has Come into Existence**
15.²⁰-15⁴⁰	Kiril Alexiev, Petia Koprinkova-Hristova. **Accuracy Analysis of IMU Navigation Algorithms**	D.Y. Ivanova, I. Dimov, J. M. Sellier, **Signed Particles and Quantum Similarity**
15.⁴⁰-16.⁰⁰	Volodymyr Kudriashov. **Multistatic Reception of Non-stationary Random Wiener Acoustic Signal**	K.G. Kapanova, I.T. Dimov, J.M. Sellier. **The Signed Particle Formulation of Quantum Mechanics: A Parallelization Scheme**
16.⁰⁰-16.²⁰	Iurii Chyrka. **Interpolation of acoustic field from nearby located single source**	An. Liolios, As. Liolios, A. Moropoulou, K. Georgiev, I. Georgiev. **A Computational Approach for the Seismic Sequences Induced Response of Cultural Heritage RC Structures Upgraded by Ties**
16.²⁰-16.⁴⁰	Atanas Nikolov, Virginio Cantoni, Dimo Dimov, Andrea Abate, Stefano Ricciardi. **Multi-Model Ear Database for Biometrics Applications**	Emilia Abadjieva, Valentin Abadjiev. **On the Improvement of the Bio-Robots Transmissions: Basic Elements of the Drivings and Alternative Solutions**
16.⁴⁰-17.⁰⁰	S. Ilchev, Z. Ilcheva. **Modular Digital Watermarking and Corresponding Steg analysis of Images on Publicly Available Web Portals**	
17.⁰⁰-17.²⁰	Karina Angelieva. **Decisions and Recommendations of the Council of the European Union in the area of open data, open access, and data intensive research**	
17.²⁰-17.³⁰	**CLOSING CEREMONY**	
18.³⁰-20.³⁰	**ACOMIN Steering Committee Meeting**	