Institute of Information and Communication Technologies
Bulgarian Academy of Sciences

International Workshop on
“Advanced Control and Optimisation: Step Ahead” – ACOSA
(supported by FP7 grant AComIn № 316087)
8-10 May 2014, Hotel “Bankya Palace”

SCIENTIFIC PROGRAMME

8 May 2014

11:00–11:10 Opening Session of the International Workshop on “Advanced Control and Optimisation: Step Ahead” – Vassil Sgurev

11:10–11:30 Presentation of the FP7 Project “AComIn (Advanced Computing in Innovation)” – Galia Angelova

11:30–13.30 Session A. Contemporary Methods for Assessment and Control of Complex Systems
Chair of Session: Lyubka Doukovska

- Ivan Popchev, Vera Angelova – Improved residual bound of the matrix equations
- Irina Radeva – Synergy in clusters: Approaches to evaluation
- Velitchko Djambov – Finding the roots of non-linear equations with high definition using the .NET Framework C# and X-MPIR
15:00–17:00 Session B. Discussion on the Benefits of Applying of Advanced Control and Optimisation
Chair of Session: Janusz Kacprzyk

9 May 2014

09:00–09:30 Presentation of the Hydraulics and Pneumatics Research Institute (INOE 2000-IHP), Romania – Alexandru Valentin Radulescu, Catalin Dumitrescu, Iulian Dutu

11:00–13:30 Session C. Discussion on the Implementation of Advanced Control Concepts and Technologies in Small and Medium-sized Enterprises
Chair of Session: Ivan Popchev

15:00–17:30 Session D. Application Aspects of the Analysis of the Contemporary Methods for Assessment, Control and Optimisation of Complex Processes
Chair of Session: Vladimir Monov

- **Svetoslav Savoy, Ivan Popchev** – Solution estimates for the discrete time parameter dependent Lyapunov equation
- **Vassil Sigurev, Stanislav Drangajov** – A Probabilistic approach to optimizing the path of monitoring the nodes of a network
- **Tatiana Atanasova, Janko Atanasov** – Integrated information system for enterprise management
- **Kiril Kolchakov, Vladimir Monov** – Examination of an algorithm for non-conflict schedule with diagonal activation of joint sub matrices in a large scale switching matrix
- **Tasbo Tashev, Vladimir Monov** – Load optimization in a grid structure for parallel computer simulations of the throughput of a crossbar switch node

10 May 2014

11:00–13:30 Session E. Applications of the contemporary optimization procedures in the financial and industrial structures
Chair of Session: Dimitar Karastoyanov

- **George Shahpazov** – Optimisation procedures in SMEs financial mechanism
- **Vasil Nikov** – Significance of the advanced control and optimisation for SMEs
- **Veselin Shahpazov** – Forecasting financial markets with artificial intelligence
- **Mincho Hadjiski, Kosta Boshnakov, Stefan Koynov** – Control of milling fan load on the base of residual useful life prediction
- **Chavdar Korsemov, Hristo Toshev** – Analysis and exploitation of wind generators

13:30 Closing Session