

## Preface

ICTERI is concerned with interrelated topics from infrastructure to education of ICT that are vibrant for both, the research and the industrial community.

With pleasure we present you the selected papers of ICTERI 2012, the eighth edition of the International Conference on Information and Communication Technologies (ICT) in Education, Research, and Industrial Applications: Integration, Harmonization, and Knowledge Transfer, held at Kherson, Ukraine on June 6-10, 2012.

The conference scope was outlined as a constellation of the following themes:

- ICT infrastructures, integration and interoperability
- Machine Intelligence, knowledge engineering (KE), and knowledge management (KM) for ICT
- Cooperation between academia and industry in ICT
- Model-based software system development
- Methodological and didactical aspects of teaching ICT and using ICT in education

Those topics were grouped in two tracks: (1) ICT in research, industrial deployment, and knowledge transfer; and (2) Methodological and didactical aspects of teaching ICT and using ICT in education.

A visit to Google Analytics proves the broad interest in the ICTERI themes. Indeed, between November 15, 2011 and May 15, 2012 we have received almost 3 000 visits to the conference web site from 71 countries (302 cities). Most prominently, the proportion of visits originating from search engine queries was growing constantly – indicating the growing interest to ICTERI 2012.

This year we made ICTERI a more structured event – comprising the main conference, three co-located workshops, and IT talks panel. The main conference program has been composed of top-rated submissions evenly covering all the themes of ICTERI scope – as shown in the tag cloud of ICTERI Key Term use.



The workshops formed the corolla around the main ICTERI by focusing on particular sub-fields relevant to the conference theme. In particular:

- Workshop on Dynamics and Evolution in Intelligent Systems (DEIS) deals mainly with Machine Intelligence, KE, and KM

- The scope of the workshop on Integration of IT in Economics Research (ITER) is more within the topic of cooperation between academia and industry
- Workshop on Algebraic, Logical, and Algorithmic Methods of System Modeling, Specification and Verification (SMSV) focuses on model-based software system development

Traditionally ICTERI hosts also our invited IT Talks panel for industrial speakers who wish to present their cutting edge ICT achievements.

Last but not least, this year's issue of ICTERI closely cooperates with another international conference with a related scope – the 4th International United Information Systems Conference (UNISCON 2012, [uniscon.org](http://uniscon.org)) held at Crimean State Humanitarian University, Yalta, Ukraine on June 1-3, 2012. UNISCON invited four of the top-rated papers of ICTERI that best match their themes and complement the program. ICTERI also invited three of the best UNISCON papers to be presented in our program. We firmly believe that this exchange made both of our events even better, more balanced and interesting for our attendees.

Overall ICTERI attracted a substantial number of submissions – a total of 70 comprising the main conference and workshops. 48 submissions to the main conference broadly fell into the four genres: full research papers (18), short research papers (20), discussion or problem analysis papers (9), and the papers on industrial experience or case study (1). As for thematic coverage, 25 papers were submitted to Track 1 and 23 – to Track 2.

Out of those 48 submissions we have accepted 25 high quality and most interesting papers to be published in our proceedings. The acceptance rate was therefore 52.08 percent. In addition to those selected publications we included the abstracts of our invited talks. The talk by our keynote speaker Prof. Grigoris Antoniou is on Formal Foundations for RDF Evolution and Repair. It is followed by the talk of Prof. Martin Strecker on Abstraction and Verification of Properties of a Real-Time Java.

The conference would not have been possible without the support of many people. First of all we would like to thank the members of our Program Committee for providing timely and thorough reviews, and also for being cooperative in doing additional review work. We are also very grateful to all the authors who submitted papers to ICTERI and thus demonstrated their interest in the research problems within our scope. We would like also to thank the local organizers of the conference whose devotion and efficiency made ICTERI a very comfortable and effective scientific forum.

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