

***ITHEA International Scientific Society***



***ITA 2013***

***XVI-th Joint International Scientific Events on  
Informatics***

***Dedicated to XX-th anniversary of IJ ITA!***

***Winter Session***

***December 17-19, 2013***

***Video-tele-conference moderated from Sofia, Kyiv and Erevan***

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The ITHEA International Journal  
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## *ITA 2013 Winter Session*

ITA 2013 Winter Session (December 17-19, 2013; Video-tele-conferences),

**IM 2013**



Second International Conference  
**Informational Modeling**

**MIM 2013**



Second International Conference  
**Mathematics of Informational Modeling**

ITA 2013 Winter Session Accent (November 25-29, 2013, Kyiv, Ukraine):

**TAAC 2013**



Third International scientific conference of students  
and young scientists  
**Theoretical and Applied Aspects of Cybernetics**

## ***Acknowledgements***

*ITA 2013 is organized by:*

**ITHEA International Scientific Society (ITHEA ISS)**

**Association of Developers and Users of Intelligent Systems (ADUIS)**

*in tight collaboration with:*

- FIS Foundations of Information Science (Spain)
- Spanish Network on Biomolecular and Biocellular Computing (Spain)
- National Academy of Sciences of Ukraine
- Federation of the Scientific-Engineering Unions /FNTS/ (Bulgaria)
  
- Institute of Information Theories and Applications FOI ITHEA (Bulgaria)
- V.M.Glushkov Institute of Cybernetics of NASU (Ukraine)
- Institute of Mathematics and Informatics, BAS (Bulgaria)
- Research Institute of Applied Semiotics of Tatarstan Academy of Sciences (Russia)
- St.Petersburg Institute for Informatics and Automation of RAS (Russia)
- Instituto Aragonés de Ciencias de la Salud (Spain)
- Dorodnicyn Computing Centre of the Russian Academy of Sciences (Russia)
- Institute of Informatics Problems of the RAS (Russia)
- Institute for Informatics and Automation Problems, National Academy of Sciences (Armenia)
- Institute of Mathematics of SD RAN (Russia)
- Institute of Mathematical Problems and Systems of NASU (Ukraine)
  
- Taras Shevchenko National University of Kiev (Ukraine)
- Universidad Politecnica de Madrid (Spain)
- Rzeszow University of Technology (Poland)
- Educational-scientific complex "Institute for applied system analysis" (Ukraine)
- Kharkiv National University of Radio Electronics (Ukraine)
- Hasselt University (Belgium)
- University of Calgary (Canada)
- Ben-Gurion University (Israel)
- Astrakhan State University (Russia)
- Taras Shevchenko National University of Luhansk (Ukraine)
- Varna Free University "Chernorizets Hrabar" (Bulgaria)

## ***Deadlines for IM 2013 and MIM 2013 (17-19.12.2013)***

**November 30, 2013:** submission of **abstracts** by e-mail: [info@foibg.com](mailto:info@foibg.com).

**March 31, 2014:** submission of **final paper** by the [ITHEA ISS Submission Web System](http://ita.ithea.org):  
<http://ita.ithea.org>.

## ***Submission of papers for ITHEA International Journals***

The camera-ready copy of the manuscript should be received by the ITHEA Journal Submission System (<http://ij.ithea.org>) or respectively by the ITHEA Conference Submission System (<http://ita.ithea.org>); e-mail for questions: [info@foibg.com](mailto:info@foibg.com).

***Please observe the rules and deadlines !***

### ***Manuscripts***

Manuscripts from members of ITHEA International Scientific Society (ITHEA ISS) will be preferably included in the events of ITA 2013.

Membership of ITHEA ISS is free and may be done by registration at the [www.ithea.org](http://www.ithea.org).

Manuscripts need to be formatted in DOC or TeX formats according the sample sheets given at:

- DOC template:

[http://www.ithea.org/conferences/ithea\\_manuscripts\\_rules-2013\\_doc\\_template.doc](http://www.ithea.org/conferences/ithea_manuscripts_rules-2013_doc_template.doc);

- TeX template:

[http://www.ithea.org/conferences/ithea\\_manuscripts\\_rules-2013\\_tex\\_template.tex](http://www.ithea.org/conferences/ithea_manuscripts_rules-2013_tex_template.tex).

ITHEA rules for preparing the manuscripts are compulsory.

Responsibility for manuscripts published in ITHEA International Journals and Book Series belongs to authors. Please *get permission to reprint* any copyrighted material.

### ***Fees***

**Registration fee** has to be paid for every paper, accepted to be published in the ITHEA International Journals or Book Series.

**Registration fee for members of ITHEA ISS** is applicable only for **papers** which meet the following requirements:

- the authors are members of ITHEA ISS. *Membership is free (do it via [www.ithea.org](http://www.ithea.org));*
- the paper contains the acknowledgement:

*"The paper is published with partial support by the project ITHEA XXI of the ITHEA ISS ( [www.ithea.org](http://www.ithea.org) ) and the ADUIS ( [www.aduis.com.ua](http://www.aduis.com.ua) )";*

- the paper is ***not financed by any other scientific project or other source.***

No special requests or contracts are needed.

**Distant Registration Fee** is **EURO 125** or **250 Leva** per paper.

**Distant Registration Fee for members of ITHEA ISS:** **EURO 75** or **150 Leva** per paper.

Distant Registration fee includes *only one exemplar* of the issue in which the paper has been *published*.

### ***Additional exemplars and Post expenses:***

One journal number costs **EUR 10** or **20 Leva**.

One book costs **EUR 20** or **40 Leva**.

Please, note that the *registration fees do not include post expenses*.

Post expenses depend of destination but are not less than **EUR 20** or **40 Leva**.

### ***Contacts for ITA 2013 Winter Session:***

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## IM 2013

Second International Conference

### Informational Modeling

November 17-19, 2013

#### *Aims and Scope*

The conference is devoted to the current research in the fields of concepts, methods, languages and tools of Informational Modelling and Simulation and its applications.

The aim of the Conference is exchange the ideas and expertise among experts in industry, research and education and not formal coordination of their efforts respecting Information Society challenges.

#### *Topics of the conference*

1. Informational Modeling (IM) and Simulation (IM&S) - Concepts, Paradigms, Approaches and Languages:
  - Modeling and Simulation (M&S) Body of Knowledge;
  - Knowledge Based IM&S. IM&S languages;
  - IM&S Heterogeneous Structures and Scalability. High Level Architecture (HLA), Agent Based IM&S.
2. IM&S Efficiency Enhancements:
  - Methods for Efficiency Estimation, Comparison and Enhancement. Cooperative, Parallel and Distributed IM&S Efficiency;
  - Accuracy enhancement and simulation speeding; Simulation Experiments Design;
  - Real and IM&S Information Storage and Transmission Formats; Data Analysis and Comparison Methods; Data Mining;
  - Dynamic Adaptation and Personalization of the Human–Computer–Model Interaction.
3. IM&S Efficacy Estimation and Life Cycle Management:
  - Meta-modeling; Econometrical Meta-Models; M&S Efficacy Indicators;
  - M&S Detailness and Life Cycle Optimization in respect of Designed Product Life Cycle Management. Emergency Cases;
  - Methods for Verification and Validation in IM&S Life Cycle.
4. IM&S Application Development Methods and Best Practices in Industry, Education and Science:
  - IM&S Impact in Industry;
  - IM&S in Science and Technology (S&T). Specifics in Information and Communication S&T;
  - IM&S in and for Education;
  - IM&S in Knowledge Market & Business Informatics.

#### *Steering Committee*

Stoyan Poryazov (Bulgaria)

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Yrii Zaichenko (Ukraine)

#### *Language*

The official languages of the Conference are English and Russian.



## **MIM 2013**

Second International Conference

### **Mathematics of Informational Modeling**

November 17-19, 2013

#### ***Aims and Scope***

The conference objective is to present and discuss current achievement in the fields of the Mathematics of Informational Modelling. This area constitutes the mathematical foundation of information science (informatics). It includes Type Theory, Mathematical Logic (for Computer Science), Program Theory, Program Verification, Theory on Algorithm, Information Theory, Coding Theory, Cryptology, etc.

The basic objective of the conference is the formulation and analysis of adequate mathematical models for the description and solution of practical engineering and related problems based on the understanding of their underlying informational structure, with the ultimate aim of contributing to the development of human society.

#### ***Topics of interest***

Topics of interest include but are not limited to:

- Automata theory and models;
- Big data technique and visualization;
- Chaos and self-organization models;
- Complex systems modeling and complexity of algorithms;
- Connectionism and Neural nets, Wavelet-neurons, and Emerging modeling objects;
- Cryptographic methods and protocols, Reliable and Secure Telecommunications;
- Discrete geometry, Distances and Similarities, Tomography;
- Financial mathematics, serious games;
- Generalized nets and models;
- Intuitionistic logic and Substructural logic;
- Learning and Intelligence algorithms;
- Modelling, Simulation, and Emulation: Mathematical theory, Formal verification;
- Multisets theory and its applications;
- Numerical methods of mathematical physics;
- Parallel algorithms, scientific computation and clouds;
- Theory of named sets and its applications;
- Uncertainty, Intuitionistic Fuzzy Sets - Theory and Applications.

#### ***Steering Committee***

Levon Aslanyan (Armenia)  
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Stoyan Poryazov (Bulgaria)  
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#### ***Language***

The official languages of the Conference are English and Russian.

# TAVC

## TAAC 2013

Third International scientific conference of students and young scientists

### Theoretical and Applied Aspects of Cybernetics

November 25 - 29, 2013, Kyiv (Ukraine)

#### *Aims and Scope*

Nowadays swift development of programming and wide applications of mathematics and information technologies in different areas of human activities is being noticed.

There are lot of projects in the history of mathematics, computer engineering and cybernetics, which were born at universities (for example, first versions of FreeBSD were created by a postgraduate student of Berkley University in 1978, famous free video editor VirtualDub began its life at university, Google was created as a study project by two students of Stanford University, well-known programming language php would not be itself without two Israeli students Endi Gutsman and Zeev Suraski, which rewrote its interpreter from scratch etc.). But such ideas implementation requires special environment, which will motivate creative processes. Institutions of higher education and research institutions develop and improve this environment. But scientific evolution is almost impossible without young generation initiative.

That's why the idea of this conference was born, which aims to create an environment for:

- scientific research experience exchange;
- joining efforts for solving urgent problems of contemporary cybernetics;
- development and popularization of scientific activities among students;
- searching for colleagues, supporters and just making new friends.

This is an opportunity for initiative students, postgraduates and young scientists to demonstrate their scientific achievements and to listen to criticism of a large audience, as well to visit theme parties, Kyiv tours, find new friends and like-minded people, have positive emotions and good time.

This conference is dedicated to the memory of the founder of Cybernetics Institute of NASU, founder of Cybernetics faculty of Taras Shevchenko National University of Kyiv, academic of NAS USSR, NASU Victor Glushkov and it's held annually from 2011.

#### *Topics of interest*

Meetings of 4 sections: computer science, applied mathematics, artificial intelligence, software engineering will take place during the conference.

Scientific programme of the conference also includes the invited lectures.

#### *Steering Committee*

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Ioannis P. Vlahavas (Greece)

### *Language*

The official languages of conference are English, Ukrainian and Russian.

### *Contacts*

#### **Scientific community of students and postgraduates**

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