

# *ITHEA International Scientific Society*



## *ITA 2013*

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

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

*June 29 - July 11, 2013*

*Hotel "SIRIUS" and Hotel "CHAIKA"*

*in the resort "St. Constantine & St. Helena", Varna, Bulgaria*

*October, 2013, Spain,*

*[www.ithea.org](http://www.ithea.org)*

### **ITA 2013 is supported by:**

The ITHEA International Journal

**"Information Theories and Applications" (IJ ITA)**

The ITHEA International Journal

**"Information Technologies and Knowledge" (IJ ITK)**

The ITHEA International Journal

**"Information Models and Analises" (IJ IMA)**

The ITHEA International Book Series

**"Information Science and Computing" (IBS ISC)**

The ITHEA International Digital Library with Scientific Index

**"Information Research and Engineering" (IDL IRE)**

## ITA 2013

Joint International Scientific Events on Informatics

July 01-10, 2013, Bulgaria; October 01–04, 2013, Spain; December 17-18, 2013 Video-Tele-conference

### ITA 2013 Summer Session

<b>KDS 2013</b>		XIX-th International Conference <b>Knowledge - Dialogue - Solution</b>
<b>CFDM 2013</b>		V-th International Conference <b>Classification, Forecasting, Data Mining</b>
<b>MeL 2013</b>		VIII-th International Conference <b>Modern (e-) Learning</b>
<b>iii 2013</b>		IV-th International Conference <b>Information - Interaction – Intellect</b>
<b>i.Tech 2013</b>		XI-th International Conference <b>Information Research and Applications</b>
<b>GIT 2013</b>		XI-th International Conference <b>General Information Theory</b>
<b>INFOS 2013</b>		VI-th International Conference on <b>Intelligent Information and Engineering Systems</b>
<b>IM 2013</b>		Second International Conference <b>Informational Modelling</b>
<b>MIM 2013</b>		Second International Conference <b>Mathematics of Informational Modeling</b>
<b>ISSI 2013</b>		VII-th International Summer School on <b>Informatics</b>

Plenary Sessions' Preliminary Time Table (conference room of the hotel "Sirius")

	29.06.13 30.06.13	01.07.13 Monday	02.07.13 Tuesday	03.07.13 Wednesday	04.07.13 Thursday	05.07.13 Friday	06.07.13 Saturday	07.07.13 Sunday	08.07.13 Monday	09.07.13 Tuesday	10.07.13 11.07.13
10:00–12:00	arrival	<b>KDS</b>	<b>CFDM</b>	<b>MeL</b>	Excursion  <b>ITHEA GALA EVENING</b>	<b>iTech</b>	<b>INFOS</b>	<b>iii</b>	<b>IM</b>	<b>MIM</b>	departure
12:00–13:00		Break	Break	Break		Break	Break	Break	Break	Break	
13:00–14:00		<b>ISSI</b>	<b>ISSI</b>	<b>ISSI</b>		<b>ISSI</b>	<b>ISSI</b>	<b>ISSI</b>	<b>ISSI</b>	<b>ISSI</b>	
14:00–16:00		<b>KDS</b>	<b>CFDM</b>	<b>MeL</b>		<b>iTech</b>	<b>INFOS</b>	<b>iii</b>	<b>IM</b>	<b>MIM</b>	
16:00–17:00		Break	Break	Break		Break	Break	Break	Break	Break	
17:00–19:00		<b>KDS</b>	<b>CFDM</b>	<b>MIM</b>		<b>iTech</b>	<b>INFOS</b>	<b>GIT</b>	<b>IM</b>	<b>MeL</b>	
Language:	<i>Russian</i>					<i>English</i>					

### ITA 2013 Autumn Session

**NIT 2013**



IV-th International Conference  
**Natural Information Technologies**

**NIT 2013**, Madrid, Spain: arrival: 23.09.2013; Sessions: 24-27.09.2013; departure: 28.09.2013

**NIT Summer School**: 23, 24, and 25 September, 2013

### ITA 2013 Winter Session

**IM 2013**



Second International Conference  
**Informational Modelling**

**IM 2013 Winter Session** Video-tele-conference managed from Sofia, December 17-18, 2013

## *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)

General sponsor:		<a href="#"><u>FOI Bulgaria</u></a>
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### *Deadlines for ITA 2013*

#### **For KDS, CFDM, MeL, i.Tech, III, GIT, INFOS, IM, and MIM, which will be held in Varna, Bulgaria, July 2013**

February 28, 2013: submission of **registration forms with request for hotel reservation and visa application forms** by e-mail: [info@foibg.com](mailto:info@foibg.com) and [office@hit-tourism.com](mailto:office@hit-tourism.com)

March 31, 2013: submission of **final paper** by the ITHEA ISS Submission Web System: <http://ita.ithea.org>

April 15, 2013: notification of the **paper acceptance** by the ITHEA ISS Submission Web System

#### **For NIT, Madrid, Spain, 23.09-28.09.2013**

July 31, 2013: submission of **registration forms and visa application forms** by e-mail: [info@foibg.com](mailto:info@foibg.com)

August 10, 2013: submission of **final paper** by the ITHEA ISS Submission Web System: <http://ita.ithea.org>

August 26, 2013: notification of the **paper acceptance** by the ITHEA ISS Submission Web System

### *Submission*

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 !***

Submit registration cards and visa forms to: Krassimir Markov, e-mail: [info@foibg.com](mailto:info@foibg.com)

### *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.foibg.com/conf/ithea\\_manuscripts\\_rules-2013\\_doc\\_template.doc](http://www.foibg.com/conf/ithea_manuscripts_rules-2013_doc_template.doc)

- TeX template: [http://www.foibg.com/conf/ithea\\_manuscripts\\_rules-2013\\_tex\\_template.tex](http://www.foibg.com/conf/ithea_manuscripts_rules-2013_tex_template.tex)

Accepted manuscripts will be published by ITHEA as follow:

- **regular papers in English or Russian** from 4 up to 12 pages and **long papers or surveys in English** from 12 up to 20 pages will be published in the International Journal "Information Theories and Applications"<sup>®</sup> (IJ ITA), International Journal "Information Technologies and Knowledge"<sup>®</sup> (IJ ITK), and International Journal "Information Models and Analyses"<sup>®</sup> (IJ IMA);

- **books** or specialized thematically organized collections will be published in the ITHEA International Book Series "Information Science and Computing" (IBS ISC).

**Papers and Books** published by ITHEA as well as **Abstracts in English or Russian** of all works will be freely available online at the ITHEA ISS Digital Library and Indexing System:

<http://idr.ithea.org> .

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.

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### *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 the **paper** which meets 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.

**Registration Fee** is **EURO 250** or **500 Leva** per paper.

**Registration fee for members of ITHEA ISS: EUR 150 or 300 Leva.**

Registration fee includes *participation fee* for one person, *presentation fee* for one paper, and *one exemplar* of the issue in which the paper has been *published*.

**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*.

**Presentation Fee** is **EURO 125** or **250 Leva** per presentation.

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

Presentation fee includes *participation fee* for one person and permits *presentation of one paper* without publishing.

**Participation fee** is **EURO 50 or 100 Leva**.

Accompanying authors or persons pay only participation fee.

**Participation fee covers only the organizing expences, including the ITHEA Gala Evening.**

It does not cover the excursion and the price of the additional proceedings of the conference.

#### **Additional exemplars and Post expences:**

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:*

Summer Session:	<b>Krassimir Markov</b> <a href="mailto:info@foibg.com">info@foibg.com</a>	<b>Vitalii Velychko</b> <a href="mailto:info@aduis.com.ua">info@aduis.com.ua</a>	<b>Alexey Voloshin</b> <a href="mailto:olvoloshyn@ukr.net">olvoloshyn@ukr.net</a>	<b>Stoyan Poryazov</b> <a href="mailto:stoyan@math.bas.bg">stoyan@math.bas.bg</a>
	<b>Galina Setlak</b> <a href="mailto:gsetlak@prz.edu.pl">gsetlak@prz.edu.pl</a>	<b>Ina Markova</b> <a href="mailto:ina@foibg.com">ina@foibg.com</a>	<b>Krassimira B. Ivanova</b> <a href="mailto:krasy78@mail.bg">krasy78@mail.bg</a>	
Autumn Session:	<b>Juan Castellanos</b> <a href="mailto:jcastellanos@fi.upm.es">jcastellanos@fi.upm.es</a>	<b>Sandra Gómez</b> <a href="mailto:sgomez@eui.upm.es">sgomez@eui.upm.es</a>	<b>Krassimir Markov</b> <a href="mailto:info@foibg.com">info@foibg.com</a>	<b>Krassimira B. Ivanova</b> <a href="mailto:krasy78@mail.bg">krasy78@mail.bg</a>
Winter Session:	<b>Stoyan Poryazov</b> <a href="mailto:stoyan@math.bas.bg">stoyan@math.bas.bg</a>	<b>Vitalii Velychko</b> <a href="mailto:info@aduis.com.ua">info@aduis.com.ua</a>	<b>Krassimir Markov</b> <a href="mailto:info@foibg.com">info@foibg.com</a>	<b>Krassimira B. Ivanova</b> <a href="mailto:krasy78@mail.bg">krasy78@mail.bg</a>

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***Accommodation for ITA 2013 Summer Session has to be made by:***



**HIT-Tourism Tur Operator, Varna, Bulgaria**

[www.hit-tourism.com](http://www.hit-tourism.com) ; +359 52 361 900; +359 888 794 159

e-mail: [office@hit-tourism.com](mailto:office@hit-tourism.com) ; Skype: *hit\_mira*

### ***ITA 2013 HOTELS***

Main hotels of ITA 2013 have no free rooms.

Please contact HIT-Tourism Tur Operator for booking rooms in other hotels at a walking distance to the hotel Sirius.

There are various three and four stars hotels in the complex "St.Constantine & St. Helena", which are at walking distance to the hotel "SIRIUS" ( <http://siriusbeach.com/uk/pricelist.php> ) :

The preferred four stars hotels are:

- *Azalia*: <http://www.azaliahotel.com/en.html>
- *Dolphin Marina*: <http://www.beachbulgaria.com/stellias/dolphinmarina.shtml>
- as well as all other hotels from the *Grand Hotel Varna Chain*: <http://www.grandhotelvarna.com>

#### **Transfer airport - hotel:**

- car (1-3 sits): EURO 24 *in one direction* for the car;
- minivan (4-7 sits): EURO 29 *in one direction* for the minivan.

Send request for reservation to both e-mails: [office@hit-tourism.com](mailto:office@hit-tourism.com) , [info@foibg.com](mailto:info@foibg.com)

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## KDS 2013

XIX-th International Conference

### Knowledge - Dialogue - Solution

July 01 - 02, 2013, Varna (Bulgaria)

#### *Aims and Scope*

The Conference continues the series of annual international KDS events organized by V.M. Glushkov Institute of Cybernetics of National Academy of Sciences of Ukraine and Association of Developers and Users of Intelligent Systems (ADUIS).

#### *Topics of interest*

- Applied Information Systems
- Data Mining and Knowledge Discovery
- Decision Making
- Intelligent information technology
- Interdisciplinary Scientific Research
- Logical Inference
- NL Text Processing
- Neural and Growing Networks
- Mathematical methods research of complex systems
- Modern (e-) Learning and intelligent systems
- Philosophy and Methodology of Informatics
- Problems of Computer Intellectualization

#### *Steering Committee*

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Yevgeniy Bodyanskiy (Ukraine)  
Yury Valkman (Ukraine)  
Yury Zaychenko (Ukraine)

#### *Language*

The official languages of the Conference are Russian and English.  
Work language at the conference time is Russian.

**ITA 2013**

Joint International Scientific Events on Informatics

July 01-10, 2013, Bulgaria; October 01–04, 2013, Spain; December 17-18, 2013 Video-Tele-conference



## **CFDM 2013**

VI-th International Conference

### **Classification, Forecasting, Data Mining**

July 02 - 03, 2013, Varna (Bulgaria)

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

The conference is devoted to the current research and applications in the fields of Classification, Clustering, Pattern Recognition, Forecasting, Features Processing, Transformations, Data Mining, and Knowledge Discovery.

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

Pattern Recognition and Forecasting  
Machine Learning  
Data Mining  
Classification and Clustering

Inductive Modelling  
Features Processing and Transformations  
Applications  
Image, Speech, Document and Signal Analysis  
Knowledge-Based Decision Support Systems

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

Yurii Zhuravlev (Russia)  
Vladimir Ryazanov (Russia)  
Levon Aslanyan (Armenia)

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Vladimir Norkin (Ukraine)  
Volodymyr Stepashko (Ukraine)

#### ***Language***

The official languages of the Conference are Russian and English.  
Work language at the conference time is Russian.





## **MeL 2013**

VIII-th International Conference

### **Modern (e-) Learning**

July 03-04, 2013, Varna (Bulgaria)

#### *Aims and Scope*

The conference is devoted to discussion of current research and applications regarding the basic directions of modern (e-) learning: Philosophy and Methodology of the Modern (e-) Learning and Modern (e-) Learning Technologies.

#### *Topics of interest*

##### ***Philosophy and Methodology of the Modern (e-) Learning***

- Accreditation and Validation of Modern (e-) Learning Materials
- Learning Communities and Virtual Spaces for Modern (e-) Learning Communities
- Copyright Regulations and Intellectual Property
- Evolution in Teacher Roles through Technology
- Experience and Problems of Implementation of Distance Learning Systems
- Informatics of the Modern Learning
- Instructional Design Theories of Modern (e-) Learning
- Institutional Issues on Technology-based Learning
- Interaction of Classical and Modern (e-) Learning
- Knowledge Market
- Modern (e-) Learning Paradigms
- Organizational Problems of Distance Learning
- Pedagogical and Organisational Frameworks of Modern (e-) Learning
- Pedagogical Approaches - Classical and Modern Didactic Principles of Modern (e-) Learning
- Policies on Technology-based Learning
- Psychological and Ergonomic Aspects of Modern (e-) Learning
- Social Aspects of Modern (e-) Learning
- Standardisation of the Modern (e-) Learning Materials
- Standards and Quality Requirements for the Certification and Assessment of the Learners' Progress
- Teaching Aspects of Modern (e-) Learning

##### ***Modern e-Learning Technologies***

- Information Retrieval and Visualization in e-Learning
- Multimedia Educational Systems
- Media for Learning in Multicultural Settings
- Mobile e-Learning Applications
- P2P e-Learning Applications
- Social Aspects in Collaborative e-Learning Systems
- Standardization in e-Learning Technologies (incl. Learning Objects, Learning Designs, Modelling Languages)
- Technology-based Blended, Distance and Open Learning
- Technology-Facilitated Learning in Complex Domains
- Technologies for advanced Teacher Training
- Technology and Human Resource Issues
- Using AI/Semantic Web Technologies for Personalized and Contextual Learning
- Web-based Educational Information Systems

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#### Steering Committee

Alexey Voloshin (Ukraine)  
Koen Vanhoof (Belgium)  
Krassimir Markov (Bulgaria)

Larissa Zaynutdinova (Russia)  
Liudmila Lyadova (Russia)  
Oleg Zakusilo (Ukraine)

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Vladimir Donchenko (Ukraine)  
Yury Zaychenko (Ukraine)

#### Language

The official languages of the Conference are English and Russian.  
Work language at the conference time is Russian.

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**i-i-i 2013**

IV-th International Conference

**Information - Interaction - Intellect**

July 04 - 06, 2013, Varna (Bulgaria)

***Aims and Scope***

The conference is devoted to discussion of current research and applications regarding the intelligent systems development:

***Topics of interest***

- AI in Risk Management and GMES
- Decision Making
- NL Text Processing
- Intelligent Technologies in Control and Design
- Multi-agent Structures and Systems
- Neural Networks

***Steering Committee***

Krassimir Markov (Bulgaria)  
Vitalii Velychko (Ukraine)

Alexander Palagin (Ukraine)  
Alexey Voloshin (Ukraine)

***Program Committee***

Adil Timofeev (Russia)  
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Yury Zaychenko (Ukraine)

***Language***

The official languages of the Conference are Russian and English.  
Work language at the conference time is Russian.



## **i.Tech 2013**

XI-th International Conference

### **Information Research and Applications**

July 06 - 07, 2013, Varna (Bulgaria)

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

The conference is devoted to discussion of current research and applications regarding the basic directions of computer science.

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

- Applied Program Systems
- Business Informatics
- Cyber Security
- Hyper Technologies
- Information Modelling
- Information Systems
- Multimedia Systems
- Distributed and Telecommunication Systems
- Quality of the Programs
- Software Engineering

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

Krassimir Markov (Bulgaria)  
Juan Castellanos (Spain)

Luis Fernando de Mingo (Spain)  
Avram Eskenazi (Bulgaria)  
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#### ***Program Committee***

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Olry Yadid-Pecht (Israel)  
Stoyan Poryazov (Bulgaria)  
Valeriya Gribova (Russia)  
Vladimir Ryazanov (Russia)

#### ***Language***

The official languages of the Conference are English and Russian.  
Working language at the conference time is English.



## **GIT 2013**

XI-th International Conference  
**General Information Theory**  
July 04 - 06, 2013, Varna (Bulgaria)

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

The conference objective is to present and discuss current achievement in the fields of the General Information Theory.

General Information Theory (GIT) is considered here not only as a pure theoretical discipline. While matter and energy are the foundation of material World, information is the foundation of the mental world as well as of the interactions in alive beings and within their communities. It is the leading factor in evolution and genetics. It is the basis of intellectual activity. Studying intelligence, we should take broader approach discovering the role of information, generally speaking, in life. The time has come to work out more uniform and general, deeper understanding of information processes which support the noosphere.

In this, broader sense, we should again and again turn our attention to the philosophy, interrelations between material and mental, correlate the notion of information in communication, biology, humanitarian areas and the physics of micro world.

We strongly believe that the progress in AI is tightly tied with our deeper understanding of informational processes, in general. The conference is dedicated to this broad issue.

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

Include, but are not limited to the main areas of GIT: (1) Theory of the Information, (2) Theory of the Information Subject (INFOS), and (3) Theory of the Information Interaction (INFORACTION):

### ***Philosophy***

- Philosophical background: material and mental – their coexistence and cooperation; the role of humanitarian and natural science knowledge
- Creation of paradigms by intellectual systems
- Information and knowledge; information and life

### ***Cognitology, Gnoseology and Semiotics***

- Theory and methodology of World cognition by intellectual systems and communities; intellectual instruments of cognition: hypothesis, theories, experimental verification and falsification, role of knowledge systems: knowledge, experience, beliefs, conventions, prejudices, religions, myths, formal and metaphorical reasoning; consciousness and selfconsciousness
- Semiotics of knowledge acquisition and model construction
- Evolution and informational processes

### ***Modern Physics***

- Physics of information processes and informational background of physics
- What give quantum mechanics and other theories of microworld to our understanding of information exchange; principle of non locality, “spooky action at a distance”

### ***Noosphere***

- **Noosphere and its informational component, simulated objects with different noosphere statuses**
- AI systems' creation within the frame of integrated interaction with environment and goal oriented activity

### ***Humanitarian Aspects***

- Modeling Informational interaction in Nature and society: physical, social systems (psychology, egregors, sociopsychology) and beyond

## ITA 2013

### Joint International Scientific Events on Informatics

July 01-10, 2013, Bulgaria; October 01–04, 2013, Spain; December 17-18, 2013 Video-Tele-conference

#### *Steering Committee*

Alexander Palagin (Ukraine)  
Anatoly Krissilov (Ukraine)  
Krassimir Markov (Bulgaria)  
Mark Burgin (USA)  
Pedro C. Marijuán (Spain)

Rafael Yusupov (Russia)  
Vassil Sgurev (Bulgaria)  
Vitaliy Lozovskiy (Ukraine)  
Vitalii Velychko (Ukraine)  
Yi Xin Zhong (China)

#### *Program Committee*

Adil Timofeev (Russia)  
Alexey Petrovskiy (Russia)  
Anatoliy Gupal (Ukraine)  
Ekaterina Solovyova (Ukraine)  
Gordana Dodig Crnkovic (Sweden)  
Gurgen Khachatryan (Armenia)  
Guy A Hoelzer (USA)  
Igor Gurevich (Russia)  
Iliya Mitov (Bulgaria)  
Iurii Kryvonos (Ukraine)  
Jerry LR Chandler (USA)  
Joseph Brenner (Switzerland)  
Karl Javorszky (Austria)  
Koichiro Matsuno (Japan)  
Christophe Menant (France)

Leonid Svyatogor (Ukraine)  
Liudmila Cheremisinova (Belarus)  
Loet Leydesdorff (Netherlands)  
Michel Petitjean (France)  
Nikolay Zagoruiko (Russia)  
Qiao Tian-qing (China)  
Sergey Krivii (Ukraine)  
Søren Brier (Denmark)  
Stanley N Salthe (USA)  
Svetlana Cojocar (Moldova)  
Tatyana Gavrilova (Russia)  
Vladimir Donchenko (Ukraine)  
Walter Riofrio (Peru)  
Wolfgang Hofkirchner (Austria)  
Yevgeniy Bodyanskiy (Ukraine)

#### *Language*

The official languages of the conference are English and Russian.

Working language at the conference time is English with translation to/from Russian.



## INFOS 2013

VI-th International Conference

### Intelligent Information and Engineering Systems

July 07 - 08, 2013, Varna (Bulgaria)

#### *Aims and Scope*

The conference is devoted to the discussion of current research, development and applications of the knowledge-based intelligent information and engineering systems.

#### *Topics of interest*

Topics of interest include but are not limited to:

##### **Theoretical foundations:**

Genetic Algorithms and Evolutionary Computing,  
Expert Systems, Hybrid Intelligent Systems,  
Fuzzy Techniques and Systems,  
Intelligent Agents and Multi-Agent Systems,  
Data Mining, Knowledge Acquisition,  
Knowledge Discovery, Knowledge-Based Systems,  
Knowledge Representation and Management,  
Natural Language Processing, Speech Understanding,  
Neural Networks, Machine Learning,  
Soft computing techniques.

##### **Intelligent Applications:**

Artificial Intelligence in Modeling and Simulation  
Bioinformatics using Intelligent and Machine Learning  
Business Intelligence Systems  
Human-Robot interaction, Image Processing  
Industrial Control and Monitoring  
Intelligent Agents Applications  
Intelligent Manufacturing Systems  
Intelligent Natural Language Systems  
Intelligent Robots  
Intelligent Tutoring Systems  
Intelligent Web Mining and Applications  
Medical and Diagnostic Systems  
Mobile Computing and Systems  
Multi-Media Intelligent Information Systems

#### *Steering Committee*

Galina Setlak, Rzeszow University of Technology, (Poland)

Krassimir Markov, Institute on Information Theories and Applications, (Bulgaria)

#### *International Program Committee*

Krassimir Markov (Bulgaria)

Galina Setlak (Poland)

Mikhail Alexandrov (Russia, Spain)

Levon Aslanyan (Armenia)

Xavier Blanco (Spain)

Yevgeniy Bodyanskiy (Ukraine)

Leon Bobrowski (Poland)

Juan Penuella Castellanos (Spain)

Jacek Kluska (Poland)

Krzysztof Kubiak (Poland)

Luis Fernando de Mingo Lopez (Spain)

Leonid Lubchik (Ukraine)

Sergey Maruev (Russia)

Alfredo Milani (Italy)

Martin Mintchev (Canada)

Iliia Mitov (Bulgaria)

Marek Orkisz (Poland)

Olry Yadid-Pecht (Israel)

Vladimir Ryazanov (Russia)

Feliks Stachowicz (Poland)

Volodymyr Stepashko (Ukraine)

Adil Timofeev (Russia)

Alexander Troussov (IBM Research, Ireland)

Marian Wysocki (Poland)

Alexey Voloshyn (Ukraine)

Koen Vanhoof (Belgium)

Arcadiy Yuschenko (Russia)

Yuriy Zaichenko (Ukraine)

#### *Language*

The official language is English.

#### *For contacts*

Galina Setlak, e-mail: [gsetlak@prz.edu.pl](mailto:gsetlak@prz.edu.pl)

**ITA 2013**

Joint International Scientific Events on Informatics

July 01-10, 2013, Bulgaria; October 01–04, 2013, Spain; December 17-18, 2013 Video-Tele-conference



**IM 2013**

Second International Conference

**Informational Modelling**

July 08 - 09, 2013, Varna (Bulgaria)

***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)

Krassimir Markov (Bulgaria)

***Program Committee***

Alexander Palagin (Ukraine)

Hasmik Sahakyan (Armenia)

Natalia Pankratova (Ukraine)

Alexey Voloshin (Ukraine)

Igor Galeluca (Ukraine)

Olga Kalynychenko (Ukraine)

Anatolij Kornienko (Russia)

Ivan Ganchev (Ireland)

Tamila Titova (Russia)

Anatolij Krissilov (Ukraine)

Ivan Tsitovich (Russia)

Vira Golyan (Ukraine)

Benoa Depaire (Belgium)

Koen Vanhoof (Belgium)

Vitalii Velychko (Ukraine)

Elena Zamyatina (Russia)

Leonid Hulyanitsliy (Ukraine)

Vitalii Vishnevskiy (Ukraine)

Emiliya Saranova (Bulgaria)

Levon Aslanyan (Armenia)

Vladimir Romanov (Ukraine)

Galina Gaivoronskaya (Ukraine)

Liudmila Lyadova (Russia)

Vladimir Shelestov (Ukraine)

Gurgen Khachatryan (Armenia)

Natalia Ivanova (Russia)

Yrii Zaichenko (Ukraine)

Natalia Kussul (Ukraine)

***Language***

The official languages of the Conference are English and Russian .





## **MIM 2013**

Second International Conference

### **Mathematics of Informational Modeling**

July 09 - 10, 2013, Varna (Bulgaria)

#### *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, and so on.

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)  
Krassimir Atanasov (Bulgaria)

Stoyan Poryazov (Bulgaria)  
Krassimir Markov (Bulgaria)

#### *Program Committee*

Alexey Petrovskiy (Russia)  
Dmitro Buy (Ukraine)  
Emil Molnár (Hungary)  
Emiliya Saranova (Bulgaria)  
Gurgen Khachatryan (Armenia)  
Hasmik Sahakyan (Armenia)  
Ivan Tsitovich (Russia)  
Koen Vanhoof (Belgium)

Leonid Hulyanitskiy (Ukraine)  
Liudmila Cheremisinova (Belarus)  
Mikhail Alexandrov (Russia)  
Ognyan Kounchev (Bulgaria)  
Sergey Krivii (Ukraine)  
Sisir Roi (India)  
Volodimir Donchenko (Ukraine)  
Yevgeniy Bodyanskiy (Ukraine)

#### *Language*

The official language of the conference is English.

**ITA 2013**

Joint International Scientific Events on Informatics

July 01-10, 2013, Bulgaria; October 01–04, 2013, Spain; December 17-18, 2013 Video-Tele-conference



**NIT 2013**

IV-th International Conference

**Natural Information Technologies**

October 01- 04, 2013, Madrid (Spain)

### *Aims and Scope*

Natural Computing can be broadly defined as the development of computer programs and computational algorithms using metaphorical inspiration from system and phenomena that occur in the natural world. Fundamentals of Natural Computing: Basic Concepts, Algorithms, and Applications present a wide-ranging survey of novel techniques and important applications of nature-based computing.

The goal of NIT 2010 is to offer a platform to critically assess present findings in the field, and to outline future developments in nature-inspired computing.

Original papers describing current research in the areas given below are invited, but other relevant areas also welcome. Papers in application areas of the same fields will also be considered.

### *Topics of interest*

Topics of interest include, but are not limited to:

#### NATURAL COMPUTING

- Cellular Computing
- DNA Computing
- Evolutionary Computation
- Membrane Computing
- Molecular Computing
- Neural Computing
- Quantum Computing

#### APPLICATIONS OF NIT

- Bioinformatics
- Data Mining and Knowledge Discovery
- Decision Making and Decision Support Systems
- Evolvable Hardware
- Information Retrieval
- Knowledge Management
- Multi-agent Structures and Systems
- Natural Language Processing
- Robotics
- Synthetic Biology
- Web Intelligence

## ITA 2013

### Joint International Scientific Events on Informatics

July 01-10, 2013, Bulgaria; October 01–04, 2013, Spain; December 17-18, 2013 Video-Tele-conference

#### *Steering Committee*

Krassimir Markov, Institute on Information Theories and Applications, Bulgaria  
Juan Castellanos, Universidad Politécnica de Madrid, Spain  
Levon Aslanyan, Institute for Informatics and Automation Problems, Armenia

#### *Program Committee*

Abraham Gutierrez, Universidad Politécnica de Madrid, Spain  
Carmen Vidaurre, Berlin Institute of Technology, Germany  
Erzsebet Csuha-J-Varju, Hungarian Academy of Sciences, Hungary  
Fernando Arroyo, Universidad Politécnica de Madrid, Spain  
Fivos Panetsos, Universidad Complutense, Spain  
Gheorghe Paun, Romanian Academy, Romania  
Giancarlo Mauri, Università di Milano-Bicocca, Italy  
Hasmik Sahakyan, Institute for Informatics and Automation Problems, Armenia  
Iliya Mitov, Institute on Information Theories and Applications, Bulgaria  
José María Sempere, Universidad Politécnica de Valencia, Spain  
Koen Vanhoof, Hasselt University, Belgium  
Kostas Chrysagis, Center for Technology Research and Innovation - CETRI, Greece  
Luis Fernando de Mingo, Universidad Politécnica de Madrid, Spain  
Marian Gheorghe, University of Sheffield, United Kingdom  
Mario Pérez Jiménez, Universidad de Sevilla, Spain  
Marion Oswald, Hungarian Academy of Sciences, Hungary  
Martyn Amos, Manchester Metropolitan University, United Kingdom  
Pedro Clemente Marijuan Fernandez, Aragon Institute of Health Sciences (I+CS), Spain  
Rudolf Freund, Technische Universität Wien, Austria  
Tasos Bezerianos, University of Patras, Greece  
Victor Mitrana, University of Bucharest, Romania  
Vincenzo Manca, Università di Verona, Italy  
Vladimir Ryazanov, Dorodnicyn Computing Centre of RAS, Russia  
Yevgeniy Bodyanskiy, Kharkiv University, Ukraine

#### *Organizing Committee*

Abraham Gutierrez, Universidad Politécnica de Madrid, Spain  
Paula Cordero, Universidad Politécnica de Madrid, Spain  
Sandra Gómez, Universidad Politécnica de Madrid, Spain  
e-mail: [nit@eui.upm.es](mailto:nit@eui.upm.es)

#### *Language*

The official language of the Conference is English.

#### *Conference Location*

The conference will held in Escuela Universitaria de Informática, Universidad Politécnica de Madrid, Spain.

#### *For contacts*

- Krassimir Markov, e-mail: [info@foibg.com](mailto:info@foibg.com)  
- Juan Castellanos, e-mail: [jcastellanos@fi.upm.es](mailto:jcastellanos@fi.upm.es)  
- Sandra Gómez, e-mail: [nit@eui.upm.es](mailto:nit@eui.upm.es)

## ITA 2013

Joint International Scientific Events on Informatics

July 01-10, 2013, Bulgaria; October 01–04, 2013, Spain; December 17-18, 2013 Video-Tele-conference



## ISSI 2013

VII-th International Summer School on Informatics

July 01 – 10, 2013, Varna (Bulgaria)

### *Aims and Scope*

The Summer School is devoted to discussion of current research, applications and education regarding the basic directions of business informatics.

### *Topics*

**Theoretical Foundations of Informatics:** Conceptions, Languages, Modelling Technologies, Metrics and Measurements, Information Visualization

**Tools and Applications:** Tools for Information Modeling, Applied Systems for Information Service, Information Access Methods and Collaboration Tools, Information Security and Reliability, New customer engagement models enabled by Informatics Tools

**Informatics of/in Education (IE):** IE Conceptions, including relation to other/traditional fields of study, Computer Aided IE, Methodology of IE

### *Steering Committee*

Juan Castellanos (Spain)  
Levon Aslanyan (Armenia)  
Koen Vanhoof (Belgium)  
Krassimir Markov (Bulgaria)

Alexander Kuzemin (Ukraine)  
Alexey Voloshin (Ukraine)  
Evgeny Eremin (Russia)  
Avram Eskenazi (Bulgaria)

Lyudmila Lyadova (Russia)  
Luis Fernando de Mingo (Spain)  
Stoyan Poryazov (Bulgaria)  
Nely Maneva (Bulgaria)

### *Language*

The official languages of the Summer School are English and Russian.

Working languages at the Summer School time are Russian (01-05.07.2013) and English (06-10.07.2013).

**Important information for participants in ITA 2013, Varna, Bulgaria**

**Please read carefully!**

**1. Contacts**

Mobile numbers of the members of the committee to be used during conference time:  
+359 878 89 07 07, +359 878 89 07 25

**2. Travel to the conference**

**1.1. From Varna**

The St.St. Constantine and Helens Resort with Sirius and Chiaka Hotels are located less than 10 km by the way from Varna to the Golden Sands resort. Please, see the map below.

The buss from Varna is No.: 8. From Ariport – bus No.: 409 to buss stop “Minior” and walk 200 meters downto sea.

**1.2. From Sofia**

Besides the direct flight to Varna and/or the transfer flight from Sofia, there are two possible variants to get from Sofia to Varna:

- by train from the Central Railway Station: [www.bdz.bg](http://www.bdz.bg)

- by bus from the Central Bus Station (right beside the Central Railway Station: [www.centralnaavtogara.bg](http://www.centralnaavtogara.bg) .)

**1.3. In Sofia**

The transportation from the Sofia Airport to the Central Railway Station and the Central Bus Station can be as follows: By bus – 84 or 284 from the Airport to “Hotel Pliska” stop, and then 213 or 214 to the Central Station.

Note: Luggage bigger than the average will require an extra ticket as well.

- shuttle-bus - from the airport to the station. The price is 1.50 BGN (possible additional taxes for the luggage).

- taxicab: **we do not recommend** to use this transport, or in case you do always check the prices on the stickers on the windows, because the foreigners especially are often offered incredibly high prices.

**2. Medicines**

We want to remind if you use some special medicines not to forget them.

**3. Currency**

The fixed official exchange rate: 1 EUR = 1.95583 BGN (leva).

In the change offices the exchange rate may vary from 1.9 to 1.95.

When you change money, please be careful when choosing the change office. At the airport usually the rates are not preferable.

Some change offices use on their front tables fixings which aren't used for the standard procedures – it might be for write the fixing on the front table, which is not the real rate for usual exchange (it may be the rate for checks or for exchanged amount more than 10,000 lv.). Please, always read the all the notices (usually written with smaller letters) and ask the clerk for the exact total you'll receive from the exchange.

We recommend exchanging not more than 50 EUR or USD at a time.

**Caution!**

**Be careful with your money, documents and other important personal belongings.**

**Make sure you keep them safe with yourself, not putting them in your luggage, as you can easily become a victim of pickpockets or thieves otherwise.**

**Please be alert in the city public transport as well as in the bus/train when approached by strangers and never leave your baggage unattended.**

**ITA 2013**

Joint International Scientific Events on Informatics

July 01-10, 2013, Bulgaria; October 01-04, 2013, Spain; December 17-18, 2013 Video-Tele-conference

