

I T H E A

International Journal

INFORMATION TECHNOLOGIES  
&  
KNOWLEDGE

2008 Volume 2 Number 2

**International Journal  
INFORMATION TECHNOLOGIES & KNOWLEDGE  
Volume 2 / 2008, Number 2**

Editor in chief: Krassimir Markov (Bulgaria)

**International Editorial Board**

Victor Gladun (Ukraine)

Abdelmgeid Amin Ali	(Egypt)	Laura Ciocoiu	(Romania)
Adil Timofeev	(Russia)	Luis F. de Mingo	(Spain)
Aleksey Voloshin	(Ukraine)	Martin P. Mintchev	(Canada)
Alexander Gerov	(Bulgaria)	Milena Dobreva	(Bulgaria)
Alexander Kuzemin	(Ukraine)	Natalia Ivanova	(Russia)
Alexander Lounev	(Russia)	Nelly Maneva	(Bulgaria)
Alexander Palagin	(Ukraine)	Nikolay Lyutov	(Bulgaria)
Alfredo Milani	(Italy)	Orly Yadid-Pecht	(Israel)
Avram Eskenazi	(Bulgaria)	Petar Barnev	(Bulgaria)
Axel Lehmann	(Germany)	Peter Stanchev	(USA)
Darina Dicheva	(USA)	Radoslav Pavlov	(Bulgaria)
Ekaterina Solovyova	(Ukraine)	Rafael Yusupov	(Russia)
Eugene Nickolov	(Bulgaria)	Rumyana Kirkova	(Bulgaria)
George Totkov	(Bulgaria)	Sergey Nikitov	(Russia)
Hasmik Sahakyan	(Armenia)	Stefan Dodunekov	(Bulgaria)
Ilia Mitov	(Bulgaria)	Stoyan Poryazov	(Bulgaria)
Irina Petrova	(Russia)	Tatyana Gavrilova	(Russia)
Ivan Popchev	(Bulgaria)	Vadim Vagin	(Russia)
Jeanne Schreurs	(Belgium)	Vasil Sigurev	(Bulgaria)
Juan Castellanos	(Spain)	Vassil Vassilev	(Bulgaria)
Julita Vassileva	(Canada)	Velina Slavova	(Bulgaria)
Karola Witschurke	(Germany)	Vitaliy Lozovskiy	(Ukraine)
Koen Vanhoof	(Belgium)	Vladimir Lovitskii	(UK)
Krassimira Ivanova	(Bulgaria)	Vladimir Ryazanov	(Russia)
Larissa Zaynudinova	(Russia)	Zhili Sun	(UK)

IJ ITK is official publisher of the scientific papers of the members of  
the ITHEA International Scientific Society,  
the Association of Developers and Users of Intellectualized Systems (ADUIS)  
and the Association for Development of the Information Society (ADIS)

IJ ITK rules for preparing the manuscripts are compulsory.

The rules for the papers for IJ ITK as well as the subscription fees are given on [www.foibg.com](http://www.foibg.com).

The camera-ready copy of the paper should be received by e-mail: [info@foibg.com](mailto:info@foibg.com).

Responsibility for papers published in IJ ITK belongs to authors.

General Sponsor of IJ ITK is the Consortium FOI Bulgaria ([www.foibg.com](http://www.foibg.com)).

International Journal "INFORMATION TECHNOLOGIES & KNOWLEDGE" Vol.2, Number 2, 2008

Edited by the Institute of Information Theories and Applications FOI ITHEA, Bulgaria,  
in collaboration with the V.M.Glushkov Institute of Cybernetics of NAS, Ukraine, and  
the Institute of Mathematics and Informatics and the Institute of Information Technologies, BAS, Bulgaria.

Publisher: Institute of Information Theories and Applications FOI ITHEA  
Sofia, 1000, P.O.B. 775, Bulgaria. [www.iteha.org](http://www.iteha.org), [www.foibg.com](http://www.foibg.com), e-mail: [info@foibg.com](mailto:info@foibg.com)

Printed in Bulgaria

Copyright © 2008 All rights reserved for the publisher and all authors.

© 2007-2008 "Information Technologies and Knowledge" is a trademark of Krassimir Markov

ISSN 1313-0455 (printed)

ISSN 1313-048X (online)

ISSN 1313-0501 (CD/DVD)