



I T H E A



International Journal

INFORMATION **TECHNOLOGIES**
&
KNOWLEDGE



2008 **Volume 2** **Number 5**

International Journal
INFORMATION TECHNOLOGIES & KNOWLEDGE
 Volume 2 / 2008, Number 5

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 Dobрева	(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)
Iliia Mitov	(Bulgaria)	Stoyan Poryazov	(Bulgaria)
Irina Petrova	(Russia)	Tatyana Gavrilova	(Russia)
Ivan Popchev	(Bulgaria)	Vadim Vagin	(Russia)
Jeanne Schreurs	(Belgium)	Vasil Sgurev	(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 Zaynutdinova	(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.

The camera-ready copy of the paper should be received by e-mail: 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).

International Journal "INFORMATION TECHNOLOGIES & KNOWLEDGE" Vol.2, Number 5, 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.ithea.org, www.foibg.com, e-mail: 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)