ITHEA

International Journal INFORMATION THEORIES & APPLICATIONS

2011 Volume 18 Number 1

International Journal **INFORMATION THEORIES & APPLICATIONS**

Volume 18 / 2011, Number 1

Editor in chief: Krassimir Markov (Bulgaria)

Victor Gladun (Ukraine)

Adil Timofeev	(Russia)	Luis F. de Mingo	(Spain)
Aleksey Voloshin	(Ukraine)	Lyudmila Lyadova	(Russia)
Alexander Eremeev	(Russia)	Martin P. Mintchev	(Canada)
Alexander Kleshchev	(Russia)	Natalia Bilous	(Ukraine)
Alexander Palagin	(Ukraine)	Nikolay Zagoruiko	(Russia)
Alfredo Milani	(Italy)	Rumyana Kirkova	(Bulgaria)
Arkadij Zakrevskij	(Belarus)	Stefan Dodunekov	(Bulgaria)
Avram Eskenazi	(Bulgaria)	Stoyan Poryazov	(Bulgaria)
Boris Fedunov	(Russia)	Tatyana Gavrilova	(Russia)
Constantine Gaindric	(Moldavia)	Valeriya Gribova	(Russia)
Galina Rybina	(Russia)	Vasil Sgurev	(Bulgaria)
Georgi Gluhchev	(Bulgaria)	Vitalii Velychko	(Ukraine)
Hasmik Sahakyan	(Armenia)	Vitaliy Lozovskiy	(Ukraine)
Ilia Mitov	(Bulgaria)	Vladimir Donchenko	(Ukraine)
Juan Castellanos	(Spain)	Vladimir Jotsov	(Bulgaria)
Koen Vanhoof	(Belgium)	Vladimir Ryazanov	(Russia)
Levon Aslanyan	(Armenia)	Yevgeniy Bodyanskiy	(Ukraine)

International Journal "INFORMATION THEORIES & APPLICATIONS" (IJ ITA) is official publisher of the scientific papers of the members of the ITHEA International Scientific Society

IJ ITA welcomes scientific papers connected with any information theory or its application. IJ ITA rules for preparing the manuscripts are compulsory.

The rules for the papers for IJ ITA as well as the subscription fees are given on www.ithea.org.

Responsibility for papers published in IJ ITA belongs to authors.

General Sponsor of IJ ITA is the **Consortium FOI Bulgaria** (www.foibg.com).

International Journal "INFORMATION THEORIES & APPLICATIONS" Vol. 18, Number 1, 2011

Printed in Bulgaria

Edited by the Institute of Information Theories and Applications FOI ITHEA, Bulgaria, in collaboration with: Institute of Mathematics and Informatics, BAS, Bulgaria, V.M.Glushkov Institute of Cybernetics of NAS, Ukraine, Universidad Politécnica de Madrid, Spain.

Publisher: ITHEA®

Sofia, 1000, P.O.B. 775, Bulgaria. www.ithea.org; e-mail: info@foibg.com

Copyright © 1993-2011 All rights reserved for the publisher and all authors.

® 1993-2011 "Information Theories and Applications" is a trademark of Krassimir Markov

ISSN 1310-0513 (printed) ISSN 1313-0498 (CD/DVD) ISSN 1313-0463 (online)