



WORKSHOP
ICT FOR NEW MATERIALS AND NANOTECHNOLOGIES
New Nano
INTERNATIONAL CONFERENCE
ROBOTICS, AUTOMATION AND MECHATRONICS'13
RAM 2013
October 8-10, 2013, Bankya, Bulgaria

Chairman:

Acad. V. Sgurev – Bulgaria

Members:

G. Angelova	- Bulgaria	A. Muchtar	– Malaysia
I. Dimov	- Bulgaria	T. Neshkov	– Bulgaria
V. Galabov	– Bulgaria	G. Osipov	– Russia
V. Hardt	– Germany	C. Rumenin	– Bulgaria
R. Hrin	– Romania	N. Shivarov	– Bulgaria
A. Hunger	– Germany	V. Slavkov	– Bulgaria
Y. Kanamiya	– Japan	B. Sokolov	– Russia
P. Kopacek	– Austria	Z. Sotirov	– USA
K. Kostadinov	– Bulgaria	G. Todorov	– Bulgaria
A. Kotsialos	– United Kingdom	S. Tschakarow	– Germany
S. Margenov	- Bulgaria	B. Vanev	- Bulgaria

Topics:

- Robot Mechanisms and Design**
- Robot Perception and Control**
- Micro and Nano Robotics**
- New Materials**
- Nano Technologies**
- Mechatronics**
- Mobile Systems**
- Microsystems and MEMS**
- Application of Robotic and Mechatronic Systems**
- *Industrial*
- *Service and Personal*
- *Security and Defense*
- *Academic and Research*

Invited Lectors:

1. Prof. Dr. Sc. Ivan Yatchev – Dean of Electro Faculty, TU-Sofia
2. Prof. Dr. Todor Neshkov - IEEE, Robotica&Automation Chapter, TU-Sofia
3. Prof. Dr. Kostadin Kostadinov - GIS Transfer Centre, Inst. of Mechanics – BAS
4. Prof. Dr. Sc. Lubomir Dimitrov – Dean of Mashine Faculty, TU-Sofia
5. Prof. Benislav Vanev – Union of Automation and Informatics, FSTU



Preliminary Program:

October 8, 2013,	14.00 - 15.00 -	Registration	
October 8, 2013,	15.00 – 15.15 -	Opening Ceremony	
October 8, 2013,	15.15 - 17.15 -		
	Welcoming Speech from IICT-BAS		Director of IICT-BAS
	Welcoming Speech from AComIn Project		Leader of AComIn Project
	Plenary Lecture:		Acad. Vasil Sgurev
	Plenary Lecture: AComIn Objectives		Prof. Dr. Sc. Galya Angelova
	Plenary Lecture: ICT in Mechatronics and Robotics		Prof. Dr. Todor Neshkov
October 8, 2013,	17.15 - 17.30 -	Coffee Break	
October 8, 2013,	17.30 - 18.00 -	Company Business Presentations	
October 8, 2013,	19.00 - 22.00 -	Welcoming Dinner	
October 9, 2013,	09.00 - 10.15 -	Session Workshop	
	Plenary Lecture:		
	Oral Presentations:		
October 9, 2013,	10.15 - 10.30 -	Coffee Break	
October 9, 2013,	10.30 - 11.45 -	Session Robotics	
	Plenary Lecture:		
	Oral Presentations:		
October 9, 2013,	11.45 - 12.15 -	Company Business Presentations	
October 9, 2013,	14.00 - 15.15 -	Session Automation	
	Plenary Lecture:		
	Oral Presentations:		
October 9, 2013,	15.15 - 15.30 -	Coffee Break	
October 9, 2013,	15.30 - 16.45 -	Session Mechatronics	
	Plenary Lecture:		
	Oral Presentations:		
October 9, 2013,	16.45 - 17.15 -	Company Business Presentations	
October 9, 2013,	17.15 - 17.30 -	Closing Ceremony	
October 9, 2013,	19.00 - 22.00 -	Closing Dinner	



Oral Presentations:

1. Influence of Nano-Diamond Particles on the Tribological Characteristics of Nickel Chemical Coatings, M. Kandeва, D. Karastoyanov, B. Ivanova, V. Pojidaeva
2. Energy Efficient Electromagnetic Linear Drives for Braille Screen, Dimitar Karastoyanov, Ivan Yatchev
3. Friction and Wear of Ni Coatings with Nanosize Particles of SiC, Mara Kandeва, Dimitar Karastoyanov, B. Ivanova, A. Dimitrova, Yavor Sofronov, N. Nikolov
4. Determination of the value of convergence parameter in a procedure of calculating the upper boundary of throughput for packet switch, T. Tashev, A. Bakanov, R. Tasheva
5. Number of Ants Versus Number for Iterations on Ant Colony Optimization Algorithm for Wireless Sensor Layout, Stefka Fidanova, Pencho Marinov
6. Синтез и анализ на манипулационен механизъм с гъвкаво звено на специализиран робот, Венцислав Славков, Светослав Савчев, Витан Гълъбов
7. Контролиране на силата на натиск при автоматизирано пробиване на кости, К. Загурски, Т. Бояджиев, Г. Бояджиев, К. Делчев, В. Витков
8. Mechatronics in the education: the experience of the Technical University of Sofia in the context of the challenges of the modern development in education and industry, Todor Neshkov, Lubomir Dimitrov
9. Подход за хардуерно решение на проблема с конфликтите в комутационни възли, К. Колчаков, В. Монов
10. Integration of Heterogeneous Data and Processes in Digital Home, Tatiana Atanasova
11. Data sources determination for information management in OMIS, N. Bakanova, T. Atanasova
12. Mechatronic Approaches for Functional Structural Synthesis of Mechanical Systems of Industrial Robots, Part I – In Regard with the Necessity of New Approaches for Designing Mechanical Systems, Vitan Galabov, Vencislav Slavkov, Gocho Slavov, Svetoslav Savchev
13. Mechatronic Approaches for Functional Structural Synthesis of Mechanical Systems of Industrial Robots, Part II – Functional Types of Kinematic Chains and Goal Motions, Vitan Galabov, Vencislav Slavkov, Gocho Slavov, Svetoslav Savchev
14. Mechatronic Approaches for Functional Structural Synthesis of Mechanical Systems of Industrial Robots, Part III – Approaches to Structural Synthesis of Path-generator Mechanisms, Vitan Galabov, Ivan Avramov, Vencislav Slavkov, Gocho Slavov, Svetoslav Savchev
15. Mechatronic Approaches for Functional Structural Synthesis of Mechanical Systems of Industrial Robots, Part IV – Approaches for Structural Synthesis of Motion-generator Mechanisms, Vitan Galabov, Ivan Avramov, Vencislav Slavkov, Gocho Slavov, Svetoslav Savchev
16. Изследване на електромагнитната съвместимост на Е/Е/РЕ системите за безопасност на промишлени работи, Николай Пантелеев, Борислава Меджидиева
17. Методи и технологии за локализация на статични и динамични обекти, Г. Желязков, Д. Иванов
18. Basic Platform for Industrial Objects Control using Wireless Communications., Ani Boneva, Zlatolilia Ilcheva, Simeon Angelov, Dichko Bachvarov, Diana Georgieva, Peter Gugutkov, Nesim Baruh, Michail Michov, Goran Isaev, Jordan Doshev, Ilko Stojanov.,
19. Архитектура на портативно преносимо устройство за събиране и отдалечено предаване на данни., Денчо Пиринчев, Бижо Бижев, Стоян Аршинков