

Etapa II/2015 – Diseminare rezultate

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Lista lucrărilor științifice concepute de membrii de cercetare ai contractului nr. 21/2014, SIACT în cadrul Etapei de execuție nr. 2/2015

1. R. G. Bozomitu, A. Păsărică, V. Cehan, C. Rotariu, C. Barabașa, “Pupil centre coordinates detection using the circular Hough transform technique”, in proc. of the 38th *International Spring Seminar on Electronics Technology* (ISSE 2015), vol., no., pp. 462-465, 6-10 May 2015, Eger, Hungary, doi: 10.1109/ISSE.2015.7248041;
2. L. Niță, R. G. Bozomitu, V. Cehan, C. Rotariu, R. G. Lupu, “Software for a bidirectional communication system for neuromotor disabled patients”, in proc. of the 38th *International Spring Seminar on Electronics Technology* (ISSE 2015), vol., no., pp. 458-461, 6-10 May 2015, Eger, Hungary, doi: 10.1109/ISSE.2015.7248040;
3. V. Cehan, R. G. Bozomitu, E. Coca, “A simple method for measuring and sorting RF coils based on the inductance and quality factor”, in proc of the 38th *International Spring Seminar on Electronics Technology* (ISSE 2015), vol., no., pp. 532-535, 6-10 May 2015, Eger, Hungary, doi: 10.1109/ISSE.2015.7248058;
4. C. Rotariu, R. G. Bozomitu, V. Cehan, A. Păsărică, H. Costin, “A wireless sensor network for remote monitoring of bioimpedance”, in proc. of the 38th *International Spring Seminar on Electronics Technology* (ISSE 2015), vol., no., pp. 487-490, 6-10 May 2015, Eger, Hungary, doi: 10.1109/ISSE.2015.7248046;
5. Radu Gabriel Bozomitu, Vlad Cehan, Robert Gabriel Lupu, Cristian Rotariu, Constantin Barabașa, “A new technique for improving pupil detection algorithm”, in proc. of the *International Symposium on Signals, Circuits and Systems* (ISSCS 2015), vol., no., pp. 1-4, 9-10 July 2015, Iași, Romania, Print ISBN: 978-1-4673-7487-3; doi: 10.1109/ISSCS.2015.7203973;
URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7203973&isnumber=7203913>;
6. A. Păsărică, C. Rotariu, R. G. Bozomitu, O. D. Eva, “Dynamic of couplings between fetal heart rate and uterine contractions”, in proc. of the *International Symposium on Signals, Circuits and Systems* (ISSCS 2015), vol., no., pp. 1-4, 9-10 July 2015, Iași, Romania, Print ISBN: 978-1-4673-7487-3; doi: 10.1109/ISSCS.2015.7203968;
URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7203968&isnumber=7203913>;
7. A. Păsărică, R. G. Bozomitu, V. Cehan, R. G. Lupu, C. Rotariu, “Pupil Detection Algorithms for Eye Tracking Applications”, in proc. of the 21st *International Symposium for Design and Technology in Electronic Packaging* (SIITME 2015), 22 – 25 October, 2015, Brașov, Romania;
8. Vlad Cehan, Radu Gabriel Bozomitu, E. Coca, “Method of Measuring and Sorting Coils Using a Frequency Synthesizer”, in proc. of the 21st *International Symposium for Design and Technology in Electronic Packaging* (SIITME 2015), 22 – 25 October, 2015, Brașov, Romania;
9. Radu Gabriel Bozomitu, Alexandru Păsărică, Vlad Cehan, Robert Gabriel Lupu, Cristian Rotariu, Eugen Coca, “Implementation of Eye-tracking System Based on Circular Hough Transform Algorithm”, in proc. of the 5th *IEEE International Conference on E-Health and Bioengineering* – (EHB 2015), “Grigore T. Popa” University of Medicine and Pharmacy, Iași, Romania, November 19-21, 2015;

10. Robert Gabriel Lupu, Radu Gabriel Bozomitu, Lucian Niță, Andrei Romila, Alexandru Păsărică, Dragoș Arotăriței, Cristian Rotariu, “Medical Professional End-Device Applications on Android for Interacting with Neuromotor Disabled Patients”, in proc. of the *5th IEEE International Conference on E-Health and Bioengineering – (EHB 2015)*, “Grigore T. Popa” University of Medicine and Pharmacy, Iași, Romania, November 19-21, 2015;

11. Lucian Niță, Radu Gabriel Bozomitu, Robert Gabriel Lupu, Alexandru Păsărică, Cristian Rotariu, “Assistive Communication System for Patients with Severe Neuromotor Disabilities”, in proc. of the *5th IEEE International Conference on E-Health and Bioengineering – (EHB 2015)*, “Grigore T. Popa” University of Medicine and Pharmacy, Iași, Romania, November 19-21, 2015;

12. Cristian Rotariu, Alexandru Păsărică, Hariton Costin, Dragoș Arotăriței, Mălina Mancaș, Remote Monitoring of Body Caloric Expenditure Using Wireless Devices, *9th International Symposium on Advanced Topics in Electrical Engineering – (ATEE 2015)*, pp. 317 – 320, DOI:10.1109/ATEE.2015.7133822, 7-9 May 2015, Bucharest, Romania;

13. Dragoș Arotăriței, Cristian Rotariu, Artificial Intelligence Methods Applied to Parameter Detection of Atrial Fibrillation, *Conference on Bio-Medical Instrumentation and related Engineering and Physical Sciences – (BIOMEPEP 2015)*, <http://biomepep.teiath.gr/2015/index.html>, Department of Biomedical Engineering, Technological Educational Institute of Athens, Greece, June 18-20, 2015;

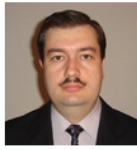
14. Ciprian Cristea, Alexandru Păsărică, Gladiola Andrușeac, Bogdan Dionisie, Cristian Rotariu, A Wireless ECG Acquisition Device for Remote Monitoring of Heart Rate and Arrhythmia Detection, in proc. of the *5th IEEE International Conference on E-Health and Bioengineering – (EHB 2015)*, “Grigore T. Popa” University of Medicine and Pharmacy, Iași, Romania, November 19-21, 2015.

Participare la manifestări tehnico-stiințifice din domeniul specific proiectului

În cadrul Etapei nr. 2/2015, membrii echipei de cercetare SIACT au participat la **6 manifestări tehnico-stiințifice** din domeniul specific proiectului, la care au prezentat un număr de **14 lucrări științifice**, astfel:

- Simpozionul Internațional IEEE, **ISSCS 2015** (2 lucrări),
- Simpozionul Internațional IEEE **ISSE 2015** (4 lucrări);
- Simpozionul Internațional IEEE **SIITME 2015** (2 lucrări);
- Conferința Internațională **BIOMEPEP 2015** (1 lucrare);
- Conferința Internațională **ATEE 2015** (1 lucrare);
- Conferința Internațională IEEE **EHB 2015** (4 lucrări).

Partenerul P1 – UMF și Coordonatorul proiectului (TUIASI) au organizat un workshop în domeniul tehnologiei asistive, intitulat „*Assistive technologies for people with disabilities*” în cadrul celei de a cincea ediții a „*International Conference on e-Health and Bioengineering*” (EHB 2015), organizată de Universitatea de Medicină și Farmacie „Grigore T. Popa” din Iași, în perioada 19-21 noiembrie 2015, sub egida IEEE.



Assistive technologies for people with disabilities

Moderators: *Assoc. Prof. R. BOZOMITU, PhD, and Lecturer C. ROTARIU, PhD*

About workshop:

Nowadays assistive technology includes assistive, adaptive, and rehabilitative products and services that are used to increase, maintain, or improve functional capabilities of individuals with many types of disabilities, from cognitive problems to physical impairments. Assistive technology promotes greater independence by enabling people with disabilities to perform tasks that they were formerly unable to accomplish, or had great difficulty accomplishing, by providing devices, or changing methods of interacting with the technology needed to accomplish such tasks. In this context the aim of the session is to present and discuss the advances in the research and development of assistive devices and to offer opportunities to the researchers, scientists, and engineers to change ideas, to share knowledge and experience in the field of assistive technology. The session welcomes papers addressing the following areas (but not limited): Augmentative and alternative communication, Assistive technology for visual impairment, Personal emergency response systems, Mobility impairment and wheelchairs, Assistive technology in sport, Assistive technology in education.

Organizers:

- Gh. Asachi Technical University, Faculty of Electronics, Telecommunications and Information Technology, Iasi, Romania
- Grigore T. Popa University of Medicine and Pharmacy, Faculty of Medical Bioengineering, Iasi, Romania

Conferința a avut 48 de participanți din 38 de țări dintr-un total de aprox. 220 de participanți înregistrați. Au fost peste 300 de lucrări prezentate, organizate în 12 topicuri.

În cadrul workshopului au fost prezentate oral un număr de 7 lucrări, cu tematică legată de tehnologii asistive. Alte 2 lucrări au fost prezentate sub formă de poster.

Workshop: Assistive Technologies for People with Disabilities

Friday, 20th November, 11:30-13:30

Room Creanga (B), Astoria Hotel

Chairpersons: *Radu Bozomitu, Cristian Rotariu*

1.	Physical Rehabilitation Assessment based on Smart Training Equipment and Mobile APPs <i>Octavian Postolache, Paper ID: 290</i>
2.	Ultrasonic Electronic System for Blind People Navigation <i>Denis Tudor, Lidia Dobrescu, Dragoș Dobrescu, Paper ID: 31</i>
3.	An Outdoor Cognition System Integrated on a Regular Smartphone Device <i>Bogdan Mocanu, Ruxandra Tapu, Titus Zaharia, Paper ID: 128</i>
4.	Implementation of Eye-tracking System Based on Circular Hough Transform Algorithm <i>Radu Gabriel Bozomitu, Alexandru Păsărică, Vlad Cehan, Robert Gabriel Lupu, Cristian Rotariu, Eugen Coca, Paper ID: 138</i>
5.	From Neuromotor Command to Feedback: a Survey of Techniques for Rehabilitation through Altered Perception <i>Oana Ferche, Alin Moldoveanu, Delia Cinteza, Corneliu Toader, Florica Moldoveanu, Alexandra Voinea, Cristian Taslitchi, Paper ID: 207</i>
6.	Motion Detection and Rendering for Upper Limb Post-Stroke Rehabilitation <i>Alexandra Voinea, Alin Moldoveanu, Florica Moldoveanu, Oana Ferche, Paper ID: 225</i>
7.	Voice-Related Quality of Life Results in Laryngectomies With Today's Speech Options and Expectations From the Next Generation of Vocal Assistive Technologies <i>Cristina Tiple, Silviu Matu, Florina Veronica Dinescu, Rodica Muresan, Radu Softlau, Tudor Drugan, Mircea Giurgiu, Adriana Stan, Daniel David and Magdalena Chirila, Paper ID: 226</i>

Poster Session – Friday, 20th November, 8:00-9:30
Room Eminescu (Room A), Astoria Hotel

8.	Monitoring Rehabilitation Exercises using MS Kinect <i>Silvia Anton, Florin Daniel Anton, Paper ID: 217</i>
9.	Assistive Communication System for Patients with Severe Neuromotor Disabilities <i>Lucian Nita, Radu Gabriel Bozomitu, Robert Gabriel Lupu, Alexandru Pasarica, Cristian Rotariu, Paper ID: 276</i>
10.	Electrical Stimulation of Sciatic Nerve after Decompression. Does the Time of Intervention Counts? <i>Dragos Petrica Sardaru, Dan Zaharia-Kezdi, Gabriela Gladiola Andrusac, Liviu Pendefunda, Paper ID: 308</i>