

ACADEMIA OAMENILOR DE STIINTA DIN ROMANIA SECTIA DE STIINTA SI TEHNOLOGIA INFORMATIEI

RAPORTUL DE ACTIVITATE A SECTIEI DE STIINTA SI TEHNOLOGIA INFORMATIEI PE ANUL 2017

A fost realizat integral Planul de activități pe anul 2017

I. COMUNICĂRI ȘTIINȚIFICE ÎN CADRUL SECTIEI

Sedința Secției de Știință și Tehnologia Informației din cadrul AOSR, 30.01.2018,

1. Aprobarea Raportului de activitate al Secției STI pe anul 2017.
2. Aprobarea Planului de activități al Secției STI pe anul 2018.
3. Propunerile Secției STI pentru Planul editorial al AOSR pe anul 2018 și pentru Premiile AOSR pe anul 2016.

Sedința Secției de Știință și Tehnologia Informației din cadrul AOSR, 28.11.2017,

Comunicare științifică:

„Tehnologia limbajului vorbit”

Prezintă D-l Prof. univ. dr. ing. Corneliu Burileanu, membru asociat al AOSR.

Sedința Secției de Știință și Tehnologia Informației din cadrul AOSR, 31.10.2017,

Comunicare științifică:

” O incursiune in tipuri de aplicatii medicale ale sistemelor multispectrale de observare,,

Prezintă D-l CS1. dr. ing. Catalin SPULBER, membru titular fondator al AOSR.

Sedința Secției de Știință și Tehnologia Informației din cadrul AOSR, 26. 09. 2017,

1. Comunicare științifică:

„Management of complexity in service systems”.

Prezintă D-l Prof. univ. dr. ing. Radu Dobrescu, membru corespondent al AOSR.

2. Planul de cercetare al Secției STI pe anul 2018.

Sedința Secției de Știință și Tehnologia Informației din cadrul AOSR, 27.06.2017,

1. Comunicare științifică:

” Modele neconventionale pentru contacte Schottky pe CSi.”.

Prezintă Domnul Prof.univ.dr.ing. Gheorghe Brezeanu – membru titular al Academiei Oamenilor de Știință din România

Sedința Secției de Știință și Tehnologia Informației din cadrul AOSR, 30.05.2017,

Comunicarea științifică:

„ RACE FOR A HIGHER SCIENTIFIC INFORMATION QUALITY (ACCURACY): A 60 YEARS (1957-2017) RETROSPECT OF THE PERSONAL CONCERNS AND STUDIES ,,,

Prezintă Prof.univ.emerit,dr.fiz. Dan Alexandru Iordache – membru de onoare al Academiei Oamenilor de Știință din România

Sedința Secției de Știința și Tehnologia Informației din cadrul AOSR, 25.04.2017.

Comunicarea științifică:

„Analiza ritmicității textelor,,

. Prezinta Domnul Prof.univ.dr.ing. Ștefan Trăușan- Matu – membru titular al Academiei Oamenilor de Știință din România/

Sedința Secției de Știința și Tehnologia Informației din cadrul AOSR, 31.01.2017.

Ordinea de zi:

1. Aprobarea Raportului de activitate al Secției STI pe anul 2016.

2. Aprobarea Planului de activități al Secției STI pe anul 2017.

3. Propunerile Secției STI pentru Planul editorial al AOSR pe anul 2017.

II. ACTIVITATEA EDITORIALĂ

Au fost publicate Analele AOSR Seria STI, Nr.1/2017(VOL.10) din si Nr.2 /2017(VOL.10).

III. PARTICIPAREA SECȚIEI STI LA ACTIVITĂȚILE AOSR

Participarea Președintelui Secției STI la activitatea Consiliului Științific AOSR. Consultări periodice cu conducerea AOSR privind problemele Secției și alte probleme ale AOSR.

IV. CONTRIBUȚIA MEMBRILOR SECȚIEI STI LA CREȘTEREA PRESTIGIULUI AOSR.

1. Prof.univ. emerit, dr. ing. Paul Sterian,
președintele Secției STI, membru titular al Academiei Oamenilor de Știință din România

A. Articole publicate 2017

1. **Optical Analysis of a ZnO/Cu₂O Subcell in a Silicon-Based Tandem Heterojunction Solar Cell**, Ørnulf Nordseth, Raj Kumar, Kristin Bergum, Laurențiu Fara, Sean Erik Foss, Halvard Haug, Florin Drăgan, **Dan CRĂCIUNESCU**, Paul Sterian, Irinela Chilibon, Cristina Vasiliu, Laurentiu Baschir, Dan Savastru, Edouard Monakhov, Bengt Gunnar Svensson, **Green and Sustainable Chemistry**, 2017,

7, pp. 57-69, **ISSN Online: 2160-696X, ISSN Print: 2160-6951** DOI: 10.4236/gsc.2017.71005 February 27, 2017.

Link

download:

<http://www.scirp.org/Journal/PaperInformation.aspx?PaperID=74376>

2. (ISI)

Modeling of integrated lighting system based on coloured and white LEDs for performances improvement, D. CRĂCIUNESCU, P. Sterian., L Fara, A. Bobeia, A. Diaconua, F. Drăgan, OPTOELECTRONICS AND ADVANCED MATERIALS – RAPID COMMUNICATIONS Vol. 11, No. 5-6, May-June 2017, p. 298 – 306 ISSN online 2065-3824, ISSN Print 1842-6573, June 7, 2017.

Link download:

<https://oam-rc.inoe.ro/index.php?option=magazine&op=view&idu=3008&catid=102>

3. Results in Sizing and Simulation of PV Applications Based on Different Solar Cell Technologies, Alexandru Diaconu, Laurentiu Fara, Paul Sterian, Dan CRACIUNESCU, Silvian Fara, Journal of Power and Energy Engineering, 2017, 5, pp. 63-74 ISSN Online: 2327-5901, ISSN Print: 2327-588X, DOI: 10.4236/jpee.2017.51005 January 19, 2017,

Link download: https://file.scirp.org/pdf/JPEE_2017011915042995.pdf

4. Optimized Management for Photovoltaic Applications Based on LEDs by Fuzzy Logic Control and Maximum Power Point Tracking, Dan CRACIUNESCU, Laurentiu Fara, Paul Sterian, Andreea Bobei, and Florin Dragan, Springer International Publishing AG 2018 I. Visa and A. Duta (eds.), *Nearly Zero Energy Communities, Springer Proceedings in Energy*, DOI 10.1007/978-3-319-63215-5_23

.....
5.(ISI)

ELECTRICAL MODELING OF THE BUFFER LAYER FOR A Cu₂O/ZnO SOLAR CELL USING SILVACO ATLAS

By: Dumitru, Constantin; Muscurel, Vlad-Florin; Nordseth, Ornulf; et al.

UNIVERSITY POLITEHNICA OF BUCHAREST SCIENTIFIC BULLETIN SERIES C-ELECTRICAL ENGINEERING AND COMPUTER SCIENCE Volume: 79 Issue: 2 Pages: 173-178 Published: 2017

6. (ISI)

T. NECSOIU^a, G. BOSTAN^{a,b}, P. STERIAN^{b,c}

Spectrophotometric method for optimizing image capture conditions for inspecting protected documents JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS Vol. 19, No. 11 - 12, November - December 2017, p.

7. Catalin Spulber, Paul Sterian, An analysis of the efficiency of some laser systems used in difficult ambient conditions, Annals of Academy of

B. Lucrari prezentate la conferinte internationale-2017

- 1. Reliability analysis of photovoltaic hybrid systems with LED-s integrated in lighting applications. case study.** Laurentiu FARA, **Dan CRACIUNESCU**, Paul STERIAN, Andreea Bobei, Florin Dragan, **Conferinta Solar World Congress (SWC 2017) Abu Dhabi**, Emiratele Arabe Unite.
- 2. Electro-Optical Modeling of a ZnO/Cu₂O Subcell in a Silicon-Based Tandem Heterojunction Solar Cell, EU PVSEC 2017**, O. Nordseth, L. Fara, R. Kumar, S.E. Foss, C. Dumitru, V.-F. Muscurel, F. Dragan, **D. Craciunescu**, K. Bergum, H. Haug, P. Sterian, I. Chilibon, C. Vasiliu, L. Baschir, D. Savastru, E. Monakhov, B.G. Svensson, **EU PVSEC 2017, 25-29 Sep. 2017, Amsterdam**

C. Lucrari prezentate la conferinte nationale

**SESIUNEA ȘTIINȚIFICĂ
DE TOAMNĂ 2017**

a Academiei Oamenilor de Știință din România

*Cercetarea științifică
în sprijinul dezvoltării durabile*

12 – 14 octombrie 2017

TIMISOARA

Cercetarea științifică în sprijinul dezvoltării durabile

1. T. NECSOIU, Optoelectronica-2001 SA, Bucharest, Romania	
2. G. BOSTAN - Optoelectronica-2001 SA, Bucharest, Romania; University "Politehnica" of Bucharest, Academic Center for Optical Engineering and Photonics, Faculty of Applied Sciences, Physics Department, Romania	
3. P.E. STERIAN - Membru titular și Președinte al secției de Știința și Tehnologia Informației a Academiei Oamenilor de Știință din România/Academy of Romanian Scientists, Bucharest, Romania; University "Politehnica" of Bucharest, Academic Center for Optical Engineering and Photonics, Faculty of Applied Sciences, Physics Department, Romania	
Metoda spectrofotometrică de optimizare a condițiilor de captare a imaginilor cu ajutorul camerei video pentru inspectarea documentelor protejate	Spectrophotometric Method to Optimize Image Capture Conditions With the Video Camera for Inspecting Protected Documents

D. Reviewer la reviste cotate ISI in 2017

- JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS
-OPTOELECTRONICS AND ADVANCED MATERIALS-RAPID COMMUNICATIONS

2. Cercetator stiintific 1, dr. ing. Catalin Spulber, membru fondator/ titular al Academiei Oamenilor de Stiinta din România,

A. RAPORT ACTIVITATE AOSR 2017

I. CONTRACTE CERCETARE

System for detection of Threat Agents in Maritime Border Environment (H2020/Societal Challenge: Border Security and External Security BES-02-2015), 2016-2018

II. LUCRARI STIINTIFICE

Lucrări publicate în Analele AOSR

Catalin Spulber, Paul Sterian, **An analysis of the efficiency of some laser systems used in difficult ambient conditions**, Annals of Academy of Romanian Scientists, Series on Science and Technology of Information, 2017, 10 (2), 75-89

Prezentari/Comunicari

1 Comunicare sesiune generala AOSR 20 martie: Spulber C, Sterian P: **O analiza privind eficienta unor sisteme laser utilizate in conditii de ambient dificile**

2. Comunicare sectie 31 oct: Spulber C **O incursiune in tipuri de aplicatii medicale ale sistemelor multispectrale de observare**

B. PROPUNERE COMUNICARE SECTIE STI, OCT. 2018

C. Spulber: O introducere in evaluarea acuitatii vizuale în retinopatia diabetica neproliferativa

3. Prof.univ.dr.ing. Ștefan Iancu, membru fondator/ titular al Academiei Oamenilor de Știință din România

RAPORT DE ACTIVITATE 2017

1.-VOLUM, „ACADEMICIANUL MIHAI DRĂGĂNESCU. Profesor, om de știință, filosof, manager și cetățean”.Coordonatori: Ștefan Iancu, Nora Rebreanu.Editura AGIR, București 2017.

Materiale prezentate în volum:

- Prof.univ.dr.ing. Ștefan Iancu, „PREFAȚĂ” (Pag.7-18);

4. Prof.univ. dr. ing. Brezeanu Gheorghe,
membru titular al Academiei Oamenilor de Știință din România

ACTIVITATEA ȘTIINȚIFICĂ
ÎN PERIOADA 01.01. 2017 - 31.12.2017

A. CONTRACTE DE CERCETARE

1. *Sistem multiparametric pentru monitorizarea fermentarii vinului*, Contract nr.146, , 2014-2016 Programul PARTENERIATE ÎN DOMENIILE PRIORITARE ,PNCDI 2, **partener** (coordonator INSTITUTUL NATIONAL DE CERCETARE DEZVOLTARE PENTRU ȘTIINTE BIOLOGICE).

B. ARTICOLE - Reviste ISI

1. **G. Brezeanu**, G. Pristavu, F. Draghici, M. Badila, R. Pascu, *Characterization technique for inhomogeneous 4H-SiC Schottky contacts: A practical model for high temperature behavior*. **Journal of Applied Physics**, Vol. **122**, (2017), pp. 084501. Impact factor: 3,569.
2. R. Pascu, F. Craciunoiu, G. Pristavu, **G. Brezeanu**, M. Kusko, *Oxide trap states versus gas sensing in SiC-MOS capacitors – The effect of N- and P-based post oxidation processes*, **Sensors and Actuators B: Chemical**, Volume 245, June 2017, Pages 911-922, ISSN 0925-4005. Impact factor: **4.758**.
3. G. Pristavu, **G. Brezeanu**, M.Badila, F. Draghici, R. Pascu, A.Pribeanu, *Barrier Stability of PT/4H-SiC Schottky Diodes Used for High Temperature Sensing*” **Materials Science Forum** vols. 897, pp. 606-609 (2017).

C. COMUNICARI LA SESIUNI ȘTIINȚIFICE (ISI Proceedings)

1. A. Enache, I. Rusu, B. Bucur, F. Draghici, G. Pristavu, M. P. Bucur, F. Enache **G. Brezeanu** "Experimental Characterization of a High Accuracy Amperometric Sense and control Circuit for Three Electrode Biosensors ", in Proc. of the **40th International Semiconductor Conference**, 11-14 Oct. 2017, Sinaia, Romania, pp.179-182.
2. D. Dobre, P. Coll, **G. Brezeanu**, "I/O Library Comparison Methodology for 40nm CMOS Tehnology", in Proc. of the **40th International Semiconductor Conference**, 11-14 Oct. 2017, Sinaia, Romania, pp.183-186.
3. E. Ceuca, **G. Brezeanu** „Development of the Interfaces to Simulate Power Converters for the Correct Choice of Components used in the Automotive Industry”, in Proc. of the **40th International Semiconductor Conference**, 11-14 Oct. 2017, Sinaia, Romania, pp.251-254.

4. G. Pristavu, **G. Brezeanu**, R. Pascu, F. Draghici, M.Badila, I.Rusu, "Study on Thermal Sensitivity of Highly Inhomogeneous Ni/4H-SiC Schottky Diodes over a Wide Temperature Range", in Proc. of the **40th International Semiconductor Conference**, 11-14 Oct. 2017, Sinaia, Romania, pp.255-256.
5. L.Teodorescu, A.S.Gheorghe, G. Brezeanu, "Prediction Algorithm to Control the Temperature Inside a Laboratory Furnace Used for Semiconductor Devices Characterization" in Proc. of the **40th International Semiconductor Conference**, 11-14 Oct. 2017, Sinaia, Romania, pp.255-258.
6. A.M.Dragan, A.Negut, V.Anghel, A.Enache, G.Brezeanu, "A Matter of Isolation- A Reset Controller Using Deep N-well and Floating Gate Technologies", in Proc. of the **40th International Semiconductor Conference**, 11-14 Oct. 2017, Sinaia, Romania, pp.297-300.

D. COMUNICARI LA SESIUNI STIINTIFICE (Scopus Proceedings)

1. G. Pristavu, **G. Brezeanu**, M.Badila, F. Draghici, R. Pascu, F.Craciunoiu, I.Rusu, A.Pribeanu, "High Temperature Behavior Prediction Techniques for Nonuniform Ni/SiC Schottky Diodes" in Proc. of the **International Conference on Silicon Carbide & Related Materials**, 17-22 Sept. 2017 Washinton DC SUA ,p.63.

5. Cercetator stiintific1, dr. ing. Cobianu Cornel, membru titular al Academiei Oamenilor de Stiinta din Romania

ACTIVITATE ȘTIINȚIFICĂ ÎN PERIOADA 01.01. 2017 – 31.12 .2017

E. – CONTRACTE DE CERCETARE

1.	Proiect "Efecte piezorezistive in filme carbonice nanocristaline si aplicatii in senzori de tensiune mecanica" -proiect castigat in cadrul competitiei nationale denumite "Proiecte Complexe" la sectiunea de "Materiale Avansate".	Dr. Cornel Cobianu este persoana cheie din partea IMT in acest proiect care se va derula in 2018-2020	Proiectul complex este coordonat de Dr. Octavian Buiu
2.	"Nanocompozite functionale pe baza de materiale carbonice cu	Dr. Cornel Cobianu este sef de proiect din	Propunere de proiect "Nucleu" pentru anul 2018

aplicatie in detectia de gaze”	partea IMT.	
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B. Patente acordate in EU si US

1.	“Oxygen galvanic sensor based on noble metals”	EP 2 813844 B1 08.02.2017	Cornel Cobianu, Bogdan Serban, Viorel Avramescu, Bryan Hobbs, Keith Pratt, Martin Willett
2.	“A humidity sensor”	EP 3043173 B1 06.09.2017	Cornel Cobianu, Bogdan Serban, Cazimir Bostan, Stefan Costea, Octavian Buiu, Alisa Stratulat, Mihai Brezeanu
3.	Lead-free electrochemical galvanic sensor	US 9557289 B2 Jan 31 2017	Cornel Cobianu, Bogdan Serban, Bryan Hobbs
4.	Coupling devices for impedance matching to a guided wave radar probe	US 9574929 B2, Feb 21, 2017	Cornel Cobianu, Ion Georgescu, Kon Yew Hughes, Stuart James Heath, Frank Martin Haran

C. Aplicatii de patente (selectie) in EU, US si WO

1.	Protective Glove with service life indicator layer	EP 3 165 104 A1	Cornel Cobianu, Bogdan Serban, Octavian Buiu, Cristian Diaconu, Viorel Dumitru, Mihai Gologanu, Eric Farin, Christiane Saunier, Alisa Stratulat
2	Relative humidity sensor and method	EP 3 211 408 A1 30.08.2017	Bogdan Serban, Mihai Brezeanu, Octavian Buiu, Cornel Cobianu,
3.	Protective glove with inner glove life indicator	US 2017/0156420 A1 June 8, 2017	Cornel Cobianu, Bogdan Serban, Octavian Buiu, Cristian Diaconu, Eric Farin, Christiane Saunier
4	Protective glove with service life indicator	WO2017/079001, 11 May 2017	Cornel Cobianu, Bogdan Serban, Octavian Buiu, Cristian Diaconu, Viorel Dumitru

D. –Lucrari publicate

1.	“Nanostructured metal oxides semiconductors for oxygen chemiresistive sensing”	B. C. Serban, M. Brezeanu, A.D. Luca, S.Z. Ali, O. Buiu, C. Cobianu, A. Stratulat, F. Udrea,	Romanian Journal of Information Science and Technology, ROMJIST Volume 20, No. 2, 2017, pp. 86-100, Paper no. 552/2017
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	V. Avramescu, O. Ionescu, N. Varachiu
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E.-Lucrari prezentate in conferinte internationale si nationale (selectie)

1.	<i>Protective Chemical Gloves with End of Service Life Indication-a Conceptual View</i>	C. Cobianu, B. Serban, Alisa Stratulat, O. Ionescu, C. Diaconu, A. Piesker	IEEE-International Semiconductor Conference (CAS 2017), from Sinaia, IEEE Proceedings CAS 2017 , 231-234
2.	<i>Senzor de oxigen,</i>	V. Avramescu, Andrea de Luca, Mihai Brezeanu, Syed Zeeshan Ali, Florin Udrea, Octavian Buiu, Cornel Cobianu, Bogdan Serban, Julian Gardner, Viorel-Georgel Dumitru, Alisa Stratulat,	Academia Oamenilor de Stiinta, Sesiunea de primavara, 2017 , pg. 85-86
3.	<i>Materials selection for NO₂ sensing - An HSAB approach</i>	B. C. Serban, O. Buiu, C. Cobianu, M. Brezeanu, O. Ionescu, V. Avramescu, N. Varachiu	The 9th international conference on advanced materials, ROCAM, 11-14 July 2017 , pp. 111
4.	<i>Resistive oxygen gas sensor based on STFO- SWCNT nanocomposite mixture</i>	B. C. Serban, M. Brezeanu, A.D. Luca, S.Z. Ali, O. Buiu, F. Udrea, V. Avramescu, C. Cobianu, O. Ionescu, C. Diaconu, N. Varachiu	The 9th international conference on advanced materials, ROCAM, 11-14 July 2017 , pp.64
5.	<i>Benzene sensor and associated method</i>	Bogdan Serban, Octavian Buiu, Mihai Brezeanu, Cornel Cobianu, Cazimir Gabriel Bostan, Cristian Diaconu	Proceedings of the 9th edition of EUROINVENT European Exhibition of Creativity and Innovation, 25-27 May 2017 , pp. 477-478
6.	<i>Strat senzitiv pentru detectarea oxigenului</i>	Serban Bogdan-Catalin, Cornel Cobianu, Mihai Brezeanu, Viorel Avramescu, Buiu Octavian, Dumitru-Viorel Georgel, Mihaila Mihai, Bostan Cazimir-Gabriel	Catalog oficial, Sectiunea A, pg . 51, Infoinvent 2017 , Chisinau, editia a XV-a

F. Contributii la capitole de carte aparute in limba engleza

1. A. De Luca, F.Udrea, G.Li, Y.Zeng, N André, G. Pollissard-Quatremère, L. A. Francis, D.Flandre, Z. Racz, J.W. Gardner, S. Z. Ali, O. Buiu, B.C. Serban, C. Cobianu and T. Wotherspoon, Sensors and Sensor Systems for Harsh Environment Applications. Book chapter in Semiconductor Devices in Harsh Condition, CRC Press, Taylor & Francis Group, 87-111, print ISBN 978-1-4987-4380-8.2017
2. Bogdan - Catalin Serban, Marius Bumbac, Octavian Ionescu, Viorel Dumitru,, Mihai Brezeanu, Octavian Buiu, Cornel Cobianu “Quantum Dots versus Dyes in Sensitized Solar Cells: Synthesis, Optimization, Performance”, book chapter in Science and applications of Tailored Nanos

G.-Premii

Awards for Book Salon, EUROINVENT 2017

- 1) **GOLD MEDAL** for Bogdan - Catalin Serban, Marius Bumbac, Octavian Ionescu, Viorel Dumitru,, Mihai Brezeanu, Octavian Buiu, Cornel Cobianu, *Quantum Dots versus Dyes in Sensitized Solar Cells: Synthesis, Optimization, Performance*, book chapter in Science and applications of Tailored Nanostructures, ISBN: 978-910086-19-3, One Central Press, Manchester, pp 89-127, **2017**.
- 2) **DIPLOMA OF EXCELLENCE** for A. De Luca, F.Udrea, G.Li, Y.Zeng, N André, G. Pollissard-Quatremère, L. A. Francis, D.Flandre, Z. Racz, J.W. Gardner, S. Z. Ali, O. Buiu, B.C. Serban, C. Cobianu and T. Wotherspoon, Sensors and Sensor Systems for Harsh Environment Applications. Book chapter in Semiconductor Devices in Harsh Condition, CRC Press, Taylor & Francis Group, 87-111, november **2016**

AWARDS for INNOVATION, EUROINVENT 2017

- 1) **GOLD MEDAL** for Bogdan Serban, Octavian. Buiu, Mihai. Brezeanu, Cornel. Cobianu, Cristian.Diaconu, *Chlorophyll-based sensors for mineral and organic acids*, EP2806268A1, 26-11-2014
- 2) **GOLD MEDAL** for Serban Bogdan- Catalin, Mihai Brezeanu, Cornel Cobianu, Octavian Buiu , Mihai Mihaila, Cristian Diaconu, *Colorimetric gas sensing layer, system and method of making the same*, European Patent Application EP 2 884274 B1, 15 03 2017
- 3) **SILVER MEDAL** for Bogdan Serban, Octavian Buiu, Mihai Brezeanu, Cornel Cobianu, Cazimir Gabriel Bostan, Cristian Diaconu Benzene sensor and associated method, WO 2016/081241 A1, 26 May 2016
- 4) **Bronz medal:** Serban Bogdan- Catalin, Cornel Cobianu, Mihai Brezeanu, Viorel Avramescu, Buiu octavian, Dumitru- Viorel Georgel, Mihaila Mihai, Bostan Cazimir- Gabriel, *Strat senzitiv pentru detectarea oxigenului*, 2848927/2015, Infoinvent 2017, Chisinau, editia a XV-a

5) **Gold medal:** Serban Bogdan- Catalin, Mihaila Mihai, Cornel Cobianu, Dumitru- Viorel Georgel, Buiu Octavian, *Senzor de dioxid de carbon* , US 8826724/2014, EP2469275/2015, Infoinvent 2017, Chisinau, editia a XV-a

6) **Gold medal:** Serban Bogdan- Catalin, Cornel Cobianu, Mihai Brezeanu, Buiu Octavian, Bostan Cazimir Gabriel, Stratulat Alisa. Senzor pentru umiditatea relativa si metoda, EP 3078964/201, Infoinvent 2017, Chisinau, editia a XV-a

H. Lucrari prezentate in foruri stiintifice si guvernamentale romanesti

1. Prezentare orala „Sensors for Internet of Things” la workshop-ul „Tehnici de stocare si valorificarea rezultatelor cercetarilor stiintifice avansate” organizat pe 5 Decembrie 2017 de IMT Bucuresti.
2. Prezentare orala „Role of Sensors in Internet of Things” la workshop-ul INTERREG” organizat de IFIN-HH in 7 Decembrie 2017.

I. Referent stiintific la lucrari publicate in jurnale internationale:

Journal of Micromechanics and Microengineering

28 .12. 2017

Dr. Cornel Cobianu

1

6. Cercetator stiintific¹, dr. ing. Neculai Andrei, membru titular al Academiei Oamenilor de Stiinta din Romania

Raport de Activitate 2017 Neculai Andrei

1. Lucrări publicate în reviste ISI cu factor de impact mai mare ca 1:

1) **N. Andrei**, *Eigenvalues versus singular values study in conjugate gradient algorithms for large-scale unconstrained optimization.*

Optimization Methods and Software, vol.32, Issue 3, (2017) pp. 534-551.

DOI: 10.1080/10556788.2016.1225211.

[This paper is dedicated to Prof. Helmut Schwarz, Duisburg-Essen University, Germany, on the occasion of his 85th birthday.]

Impact Factor: 1.490 (Q1)

2) **N. Andrei**, *Accelerated adaptive Perry conjugate gradient algorithms based on the self-scaling memoryless BFGS update.*

Journal of Computational and Applied Mathematics, 325 (2017) pp.149-164.

Impact Factor: 1.328 (Q1)

3) **N. Andrei**, *An adaptive scaled BFGS method for unconstrained optimization.*

Numerical Algorithms. (Acceptată 2017)

DOI: 10.1007/s11075-017-0321-1

Impact Factor: 1.366 (Q2)

(<https://link.springer.com/article/10.1007%2Fs11075-017-0321-1>)

4) **N. Andrei**, *A Dai-Liao conjugate gradient algorithm with clustering of eigenvalues.*

Numerical Algorithms. (Acceptată 2017)

DOI 10.1007/s11075-017-0362-5

Impact Factor: 1.366 (Q2)

(<https://link.springer.com/article/10.1007/s11075-017-0362-5>)

5) **N. Andrei**, *A double parameter scaled BFGS method for unconstrained optimization.*

Journal of Computational and Applied Mathematics, 332 (2018) pp.26-44

DOI: 10.1016/j.cam.2017.10.009

Impact Factor: 1.328 (Q1)

2. Lucrări publicate în reviste necotate ISI:

1) **N. Andrei**, *An adaptive conjugate gradient algorithm with clustering the singular values of the search direction matrix for large-scale unconstrained optimization.* **Annals of Academy of Romanian Scientists**, Series on Science and Technology of Information. Vol. 10, nr.2, 2017, pp. 37-58

3. Cărți publicate în Edituri din străinătate:

1). **N. Andrei**, **Continuous Nonlinear Optimization for Engineering Applications in GAMS Technology**” Springer Optimization and Its Applications, Volume 121
Springer Science+Business Media New York 2017
ISBN: 978-3-319-58356-3
e-book ISBN: 978-3-319-58356-3
ISSN: 1931-6828
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Springer New York Heidelberg Dordrecht London
508 + XXIV pages.

4. Rapoarte tehnice sub egida ICI:

1) **N. Andrei**, *A double parameter scaled BFGS method for unconstrained optimization. Preliminary computational results.* ICI Technical Report, September 11, 2017.

2) **N. Andrei**, *Essential Computational Linear Algebra. Preliminary version.* ICI Technical Report, April 21, 2017.

3) **N. Andrei**, *Particle Swarm Optimization Method for Engineering Nonlinear Constrained Optimization.* ICI Technical Report, March 15, 2017.

- 4) N. Andrei, A Dai-Liao conjugate gradient algorithm with clustering the eigenvalues. ICI Technical Report, January 4, 2017
- 5.
6. Acceptare de a participa în Editorial Board al revistei cotate ISI “**Numerical Algorithms**” cu factorul de impact: 1.366.
7. Participare la elaborarea Site-ului web al Școlii doctorale de Automatică și Calculatoare, finalizat la sfârșitul lui aprilie 2017, accesat la adresa:
<http://doctorat.acs.pub.ro/>.
 Vezi și adresa:
<http://doctorat.acs.pub.ro/conducatori-si-oferta-stiintifica/oferta-stiintifica/>
8. Elaborarea documentului: **Dr. Neculai Andrei – Contribuții științifice**, pentru a fi inclus în lucrarea: *Știința și Tehnologia Informației în Istoria AOSR – volum aniversar dedicat Marii Uniri din 1918*, publicată de Editura Academiei Oamenilor de Știință din România. (67 de pagini). Documentul este vizibil la adresa: <https://camo.ici.ro/neculai/nandrei.pdf>

7. Prof.univ. dr. ing. Ștefan Trăușan-Matu,
membru titular al Academiei Oamenilor de Știință din România

Raport individual de activitate pe anul 2017

Articole în reviste ISI

1. Denislam, S., Dascalu, M., & Trausan-Matu, S. (2017). Predicting Collaboration based on Students' Pauses in Online CSCL Conversations. University Politehnica of Bucharest Scientific Bulletin Series C-Electrical Engineering and Computer Science, 79(2), 83–92.
2. Stavarache, L. L., Balint, M., Dascalu, M., Trausan-Matu, S., & Nistor, N. (2017). BlogCrawl: Customized Crawling of Online Communities. University Politehnica of Bucharest Scientific Bulletin Series C-Electrical Engineering and Computer Science, 79(2), 3–14.
3. Dascalu, M., McNamara, D.S., Trausan-Matu, S. Allen, L.K. Cohesion network analysis of CSCL participationBehav Res Methods., Springer, in press. doi:10.3758/s13428-017-0888-4

1.

Articole în reviste internaționale (altele decât ISI)

2.

4. Trausan-Matu, S., Is it possible to grow an I–Thou relation with an artificial agent? A dialogistic perspective, AI & SOCIETY Journal, Springer, (in press) DOI <https://doi.org/10.1007/s00146-017-0696-5>
5. Philippe Dessus, Jean-Pascal Simon, Mihai Dascalu, Ștefan Trausan-Matu, ReaderBench : un outil d’aide à l’analyse de discussions philosophiques, Jean-Pascal Simon Michel Tozzi (eds.) *Paroles de philosophes en herbe Regards croisés de chercheurs sur une discussion sur la justice en CM2*, UGA Éditions Université Grenoble Alpes Grenoble, 2017, 151-172

Articole publicate în proceedings-uri ISI

6. Ahmed, M.A., Trausan-Matu, S. (2017) Using natural language processing for analyzing Arabic poetry rhythm, 16th RoEduNet Conference: Networking in Education and Research (RoEduNet), IEEE, pp. 1 – 5
7. Barbu, M.S., Trausan-Matu, S. (2017) Intertextuality detection in literary texts using Word2Vec models, 21st International Conference on System Theory, Control and Computing (ICSTCC), IEEE, pp. 262 - 265
8. Cercel, D.C., Onose, C., Trausan-Matu, S., Pop, F. (2017) Exploiting Opinion Influence in Question Answering Systems, 29th IEEE International Conference on Tools with Artificial Intelligence (ICTAI)
9. Corlatescu, D., Paraschiv, I. C., Dascalu, M., Trausan-Matu, S., & Nistor, N. (2017). Predicting through Writing Style the Impact of Blog Posts in Online Communities. In 16th Int. Conf. on Networking in Education and Research (RoEduNet). Targu Mures, Romania: IEEE.
10. Dascalu, M., Dessus, P., Thuez, L., & Trausan-Matu, S. (2017). How well do Student Nurses Write Case Studies? A Cohesion-Centered Textual Complexity Analysis. In E. Lavoué, H. Drachsler, K. Verbert, J. Broisin & M. Pérez-Sanagustín (Eds.), 12th European Conference on Technology Enhanced Learning (EC-TEL 2017) (pp. 43–53). Tallinn, Estonia: Springer.
11. Dascalu, M., Gutu, G., Ruseti, S., Paraschiv, I. C., Dessus, P., McNamara, D. S., Crossley, S., & Trausan-Matu, S. (2017). ReaderBench: A Multi-Lingual Framework for Analyzing Text Complexity. In E. Lavoué, H. Drachsler, K. Verbert, J. Broisin & M. Pérez-Sanagustín (Eds.), 12th European Conference on Technology Enhanced Learning (EC-TEL 2017) (pp. 495–499). Tallinn, Estonia: Springer.
12. Dascalu, M., Jacovina, M., Soto, C. M., Allen, L. K., Dai, J., Guerrero, T. A., & McNamara, D. S. (2017). Teaching iSTART to Understand Spanish. In A. E, R. Baker, X. Hu, M. M. T. Rodrigo & B. du Boulay (Eds.), 18th Int. Conf. on Artificial Intelligence in Education (AIED 2017) (pp. 485–489). Wuhan, China: Springer.
13. Dascalu, M., Westera, W., Ruseti, S., Trausan-Matu, S., & Kurvers, H. (2017). ReaderBench Learns Dutch: Building a Comprehensive Automated Essay Scoring System for Dutch. In A. E, R. Baker, X. Hu, M. M. T. Rodrigo & B. du Boulay (Eds.), 18th Int. Conf. on Artificial Intelligence in Education (AIED 2017) (pp. 52–63). Wuhan, China: Springer.
14. Grozea, C., Cercel, D.C, Onose; C., Stefan Trausan-Matu, S. (2017) Atlas: News aggregation service, 16th RoEduNet Conference: Networking in Education and Research (RoEduNet), IEEE, pp. 1 – 6
15. Gutu, G., Dascalu, M., Ruseti, S., Rebedea, T., & Trausan-Matu, S. (2017). Unlocking the Power of Word2Vec f4 or Identifying Implicit Links. In 17th IEEE Int. Conf. on Advanced Learning Technologies (ICALT2017) (pp. 199–200). Timisoara, Romania: IEEE.
16. Gutu, G., Dascalu, M., Trausan-Matu, S., & Lepoivre, O. (2017). How Adequate is your CV? Analyzing French CVs with ReaderBench. In 3rd Int. Workshop on Design and Spontaneity in Computer-Supported Collaborative Learning (DS-CSCCL-2017), in conjunction with the 21th Int. Conf. on Control Systems and Computer Science (CSCS21) (pp. 559–565). Bucharest, Romania: IEEE.
17. Gutu, G., Dascalu, M., Trausan-Matu, S., Heutelbeck, D., Hemmje, M., Westera, W., & Trausan-Matu, S. (2017). Semantic Annotation and Automated Text Categorization using Cohesion Network Analysis. In 5th Int. Workshop on Semantic and

- Collaborative Technologies for the Web, in conjunction with the 13th Int. Conf. on eLearning and Software for Education (eLSE 2017) (pp. 25–32). Bucharest, Romania: Advanced Distributed Learning Association.
18. Gutu, G., Dascalu, M., Trausan-Matu, S., Heutelbeck, D., Hemmje, M., Westera, W., & Trausan-Matu, S. (2017). Semantic Annotation and Automated Text Categorization using Cohesion Network Analysis. In 5th Int. Workshop on Semantic and Collaborative Technologies for the Web, in conjunction with the 13th Int. Conf. on eLearning and Software for Education (eLSE 2017) (pp. 25–32). Bucharest, Romania: Advanced Distributed Learning Association.
 19. Iacob, R., Rebedea T. and Trausan-Matu, S. (2017) NLCP: Towards a Compiler for Natural Language, 21st International Conference on Control Systems and Computer Science (CSCS), Bucharest, 2017, pp. 252-259
 20. Sirbu, M. D., Panaite, M., Secui, A., Dascalu, M., Nistor, N., & Trausan-Matu, S. (2017). ReaderBench: Building Comprehensive Sociograms of Online Communities. In 9th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC 2017). Timisoara, Romania: IEEE.
 21. Nistor, N., Panaite, M., Dascalu, M., & Trausan-Matu, S. (2017). Identifying Socio-cognitive Structures in Online Knowledge Communities (OKCs) using Cohesion Network Analysis. In 9th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC 2017). Timisoara, Romania: IEEE.
 22. Nistor, N., Dascalu, M., Gutu, G., Trausan-Matu, S., Choi, S., Haberman-Lawson, A., Brands, B.A., Körner, C., Koletzko, B. (2017) Mass Customization in Continuing Medical Education: Automated Extraction of E-Learning Topics. In E. Lavoué, H. Drachsler, K. Verbert, J. Broisin & M. Pérez-Sanagustín (Eds.), 12th European Conference on Technology Enhanced Learning (EC-TEL 2017) (pp. 576-579). Tallinn, Estonia: Springer.
 23. Paraschiv, I. C., Dascalu, M., Trausan-Matu, S., Nistor, N., Montes de Oca, A. M., & McNamara, D. S. (2017). Semantic Similarity versus Co-authorship Networks: A Detailed Comparison. In 3rd Int. Workshop on Design and Spontaneity in Computer-Supported Collaborative Learning (DS-CSCL-2017), in conjunction with the 21th Int. Conf. on Control Systems and Computer Science (CSCS21) (pp. 566–570). Bucharest, Romania: IEEE.
 24. Toma, I., Alexandru, C.-E., Dascalu, M., Dessus, P., & Trausan-Matu, S. (2017). Semantic Boggle: A Game for Vocabulary Acquisition. In E. Lavoué, H. Drachsler, K. Verbert, J. Broisin & M. Pérez-Sanagustín (Eds.), 12th European Conference on Technology Enhanced Learning (EC-TEL 2017) (pp. 606–609). Tallinn, Estonia: Springer.
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Articole în volume de lucrări ale unor conferințe internaționale (altele decât ISI)

25. Trausan-Matu S. The influence of Bakhtin’s ideas on natural language processing, e-Learning, and fostering creativity, in Elena Semenova (ed.) The Problem of Chronotope in modern scientific studies: International round table dedicated to M.M. Bakhtin (19-20 April 2017, Moscow FSBSI «IAEaCS RAE»). Collection of reports and articles, 2017, pp. 375-384
26. Crossley, S. A., Dascalu, M., Trausan-Matu, S., Allen, L., & McNamara, D. S. (2016). Document cohesion flow: Striving towards coherence. In Papafragou, A., Grodner, D., Mirman, D., & Trueswell, J.C. (Eds.) Proceedings of the 38th Annual Conference of the Cognitive Science Society. (pp. 764-769). Austin, TX: Cognitive Science Society.

27. Crossley, S. A., Dascalu, M., Baker, M., McNamara, D. S., & Trausan-Matu, S. (2017). Predicting Success in Massive Open Online Courses (MOOC) Using Cohesion Network Analysis. In 12th Int. Conf. on Computer-Supported Collaborative Learning (CSCL 2017) (pp. 103–110). Philadelphia, PA: ISLS.
 28. Rasid, C., Trausan-Matu, S. (2017) Identification of Agreement and Disagreement in Chat Conversations, Conferinta Nationala de Interactiune Om-Calculator, Craiova, pp. 95-100
 29. Gutu, G., Dascalu, M., Rebedea, T., & Trausan-Matu, S. (2017). Time and Semantic Similarity – What is the Best Alternative to Capture Implicit Links in CSCL Conversations? In 12th Int. Conf. on Computer-Supported Collaborative Learning (CSCL 2017) (pp. 223–230). Philadelphia, PA: ISLS.
 30. Gutu, G., Ruseti, S., Dascalu, M., & Trausan-Matu, S. (2017) Keyword Mining and Clustering based on Cohesion Network Analysis. In D. Trandabat & D. Gifu (Eds.), 3rd Workshop on Social Media and the Web of Linked Data (RUMOUR 2017), in conjunction with the Joint Conference on Digital Libraries (JCLD 2017) (pp. 23–30). Toronto, Canada: "Alexandru Ioan Cuza" University Publishing House.
 31. Mihai Dascalu, Danielle S. McNamara, Scott A. Crossley, Stefan Trausan-Matu (2016) Age of Exposure: A Model of Word Learning. In: Proceedings of the Thirtieth AAAI Conference on Artificial Intelligence (AAAI 2016), Phoenix, USA, pp. 2928-2934
 32. Cercel, Dumitru-Clementin, et al. (2017) oIQa: An Opinion Influence Oriented Question Answering Framework with Applications to Marketing Domain. Proceedings of the 1st Workshop on Natural Language Processing and Information Retrieval associated with RANLP 2017. 2017, pp. 11-18.
 33. Grigoroiu, A., Toma, I., Dascalu, M., Trausan-Matu, S. (2017) LearnerSkill - A Serious Hex Wars Game Centered on Learner Comprehension. Conferinta Nationala de Interactiune Om-Calculator, Craiova, pp. 11-14
 34. Niculescu, I.D., Trausan-Matu, S. (2017) Rhythm analysis in chats using Natural Language Processing. Conferinta Nationala de Interactiune Om-Calculator, Craiova, pp. 69-74
 35. Nistor, N., Dascalu, M., Stavarache, L.L., Trausan-Matu, S. (2017) A Blended-Learning Higher Education Seminar with Learning Analytics Support, 17th Biennial EARLI Conference for Research on Learning and Instruction.
 36. Nistor, N., Trausan-Matu, S., Dascalu, M., Dessus, P. (2017) Conceptual Ground and Findings Overview of the Polyphonic Analysis of Knowledge Building Dialogs, 17th Biennial EARLI Conference for Research on Learning and Instruction, 2017
- 4.

Articole în reviste acreditate CNCSIS

37. Stere, C-C., Trausan-Matu, S. Generation of musical accompaniment for a poem, using artificial intelligence techniques. *Revista Romana de Interactiune Om-Calculator* 10(3), 250-270, 2017.
 38. Toma, I., Alexandru, C.E., Dascalu, M., Dessus, P., Trausan-Matu, S. Semantic Taboo – A Serious Game for Vocabulary Acquisition, *Revista Romana de Interactiune Om-Calculator* 10(2), 241-256, 2017.
 39. Trausan-Matu, S. Hermenophore tools, a new perspective on text analysis. *Revista Romana de Interactiune Om-Calculator* 10(1), 75-88, 2017.
- 5.

Prezentări în cadrul unor manifestări științifice în țară

1. Ștefan Trăușan-Matu – O analiză polifonică a corespondenței între Leibniz și Clarke, Sesiunea Anuală (Toamnă) 2017 a Diviziei de Logică, Metodologie și Filosofia Științei, CRIFST, 19 octombrie 2017,
2. Ștefan Trăușan-Matu, Is generation of individualised curricula the future of paediatric eLearning?, 8th Europaediatric Congress, București, 8 iunie 2017
3. Ștefan Trăușan-Matu, Consciousness, Dialogism, and Polyphony. A New Perspective on Artificial Intelligence, Seminar IRH-ICUB Consciousness and Cognition: An Interdisciplinary Approach <https://irhunibuc.wordpress.com/2016/04/05/new-seminar-consciousness-in-philosophy-andneuroscience/>, București, 23 mai 2017
4. Ștefan Trăușan-Matu, Înțelegerea limbajului natural din perspectivele neurologică și a inteligenței artificiale, Congresul Societății de Neurologie din România, București, 13 mai 2017
5. Ștefan Trăușan-Matu, Analiza ritmicității textelor, sediul AOSR, sala „Drepturile Omului”, București, 25 aprilie 2017
6. Ștefan Trăușan-Matu, The influence of Bakhtin’s ideas on natural language processing, e-Learning, and fostering creativity, International round table, dedicated to M. M. Bakhtin, "The Problem of the Chronotope in modern scientific research" April 20, 2017, Moscow (video presentation – disponibilă pe YouTube)

Proiecte internaționale

6. Proiect H2020 RAGE
7. COST Action TEXTLINK
8. COST Action „Republic of Letters”

Membru în comitete științifice la conferințe internaționale (selecție)

ICLS 2016, EC-TEL 2017, EGC 2017, ICWL 2017, ICALT 2017, LAK 2017, SYNASC 2017, CSCS 2017 etc.

Recenzor la reviste internaționale cotate ISI în 2017

- Neural Networks
- Information Sciences
- Computers in Human Behavior
- Knowledge-Based Systems
- Journal of Healthcare Engineering
- Computers & Electrical Engineering

8. Prof.univ.dr.ing. Mircea Bodea,
membru corespondent al Academiei Oamenilor de Știință din
România, Senior Member IEEE

Report act 2017

Lista lucrarilor publicate/acceptate pentru publicare in anul 2017

M. Gheorghe, M. Bodea. *Calibration Optimization Study for Tilt-Compensated Compasses*, IEEE Transactions on Instrumentation & Measurement, acceptat pentru publicare.

V. Bucur, G. Banarie, S. Marinca, M. Bodea, *An Embedded Charge Pump for a Zener-Based Voltage Reference Compensated Using a ΔV_{BE} Stack*, MIXDES 2017: 24th International Conference Mixed Design of Integrated Circuits and Systems, Session 1 (Part 3): Design of Integrated Circuits and Microsystems, June 20-24, 2017, Bydgoszcz, Poland. Best Paper Award,

C. Grecu, M. Bodea, C. Iordache, G.-B. Istrate. *Bidirectional Predicting Zero Cross Detector for Battery Charger*, Proceedings of the International Semiconductor Conference (CAS), Sinaia – România, Oct. 2017, Best Paper Award

9. PROF. univ. emerit dr. DAN-ALEXANDRU IORDACHE, membru de onoare al Academiei Oamenilor de Știință din România

Am acționat permanent conform opiniei exprimate¹ de Academicianul Șerban Țițeica (1908-1985) – conducătorul tezei mele de Licență la facultatea de Fizică a Universității din București: “Activitățile de cercetare înseamnă să acționezi în domenii necunoscute, cu rezultate nesigure. Cine nu știe să riște, nu va obține nimic!”.

A. Lucrări științifice comunicate

1. P. E. Sterian, **D. A. Iordache** “Towards a Scientific Information School”, Sesiunea științifică de primăvară a Academiei Oamenilor de Știință din România, 24 martie 2017, București.
2. **D. A. Iordache**, R. N. Dobrescu “Study of the Information Concept and of the Information Quality”, Comunicare invitată în cadrul Conferinței anuale 2017 a Institutului de Mecanica solidelor și a Comisiei de Acustică ale Academiei Române, 18 mai 2017, Sala “Luxemburg” a Casei Academiei (document cu 9 pagini web), **publicată online: lucrarea M02 în cadrul site-ului Sisom & Acoustics Papers al Institutului de Mecanica Solidelor al Acad. Române, 2017.**

¹ În cadrul unei emisiuni de radio (din România) din 1970, fapt consemnat de revista “Știință și Tehnică”, la pagina 75 a numărului 61 (noiembrie 2016) al celui de al 65-lea an de apariție (2016).

3. **D. A. Iordache** “Race for a higher quality of the scientific information: a 60 years (1957-2017) retrospect of the main personal concerns and studies”, Comunicare în cadrul secției de Știința și Tehnologia Informației a AOSR”, 30 mai 2017.

B. Lucrări științifice publicate, respectiv elaborate în vederea publicării

1. **D. A. Iordache**, R. N. Dobrescu “Study of the Information Concept and of the Information Quality”, Lucrare publicată on-line, sub indicativul M02, în cadrul paginii web SISOM&Acoustics_Papers_2017 a Conferinței anuale 2017 a Institutului de Mecanica solidelor și a Comisiei de Acustică ale Academiei Române.
2. P. E. Sterian, **D. A. Iordache** “Towards a Scientific Information School”, prezentată în vederea publicării în Annals of the Academy of Romanian Scientists, section of Information Science and Technology, 2017.
3. **D. A. Iordache** “Race for a higher quality of the scientific information: a 60 years (1957-2017) retrospect of the main personal concerns and studies, I. First (1957-Summer 1992)”, Annals of the Academy of Romanian Scientists, section of Information Science and Technology, vol. 10, number 2, 2017, pp. 5-18.
4. **D. A. Iordache** “Race for a higher quality of the scientific information: a 60 years (1957-2017) retrospect of the main personal concerns and studies, II. Years (Fall 1992 - 2017)”, Annals of the Academy of Romanian Scientists, section of Information Science and Technology, vol. 10, number 2, 2017, pp. 19-33.
5. **D. A. Iordache** “The paper “L’étude de la courbe dynamique d’aimantation ... (dynamic magnetization curves of some high-permeability mixed manganese and zinc ferrites)”, D. Iordache, Bul. Inst. politeh. București, **29**(2) 25-41(1967), Fr – revisited”, prezentată în vederea publicării în Buletinul Universității “Politehnica” din București, series A: Applied Mathematics and Physics, 2017.

C. Lucrări didactice elaborate în vederea publicării

1. **D. A. Iordache** “Să ne cunoaștem mai bine! Nimic nou sub Soare! Haideti să ne îngrijim grădina!”, prezentată revistei Evrika drept posibilă fasciculă 1 a seriei “*În preajma Centenarului Marii Noastre Uniri (Elemente de Istoria României)*”
2. **D. A. Iordache** “Educația tinerilor supradotați – mult diferită (uneori chiar opusă) principiilor învățământului uzual (didacticii aplicate) în științele exacte”, prezentată revistei de Fizică din Sighet, destinată învățământului preuniversitar.

D. Monografiile didactice în curs de definitivare

1. **D. A. Iordache** “Let’s learn Exact Sciences by Problems Solving”, 3 volume: a) învățământ pre-universitar, b) învățământ universitar, c) învățământ post-universitar (cursuri Masterat, respectiv doctorat), versiuni în limbile: (i) română, respectiv: (ii) engleză, cca. 1200 pagini, prin includerea unor: d) elemente privind “punțile de legătură dintre științe: (i) Probabilități și Teoria Informației, (ii) Statistici matematice, (iii) Prelucrările de date, (iv) unele limbaje de programare a calculatoarelor, (v) Similitudinea fizică, (vi) Simetrii fizice, (vii) Teoria gravitației, (viii) unele aplicații ale Fizicii cuantice, (ix) unele legături între chimie și biologie.

E. Traduceri de monografii ale unor specialiști internaționali renumiți din domeniile tehnico-științifice

1. **D. A. Iordache** – Traducerea adnotată a monografiei științifice: Dr. Danny Faulkner “Universe by Design”, Master Books, 1st printing - 2004, 4th printing – 2015, 142 pagini format A3.

10. Cercetator stiintific 1, dr. ing. Ciprian Iliescu
membru de onoare al Academiei Oamenilor de Știință din România

Dr. Ciprian Iliescu

RAPORT DE ACTIVITATE- 2017

Articole ISI cu afiliere AOSR:

(legenda: *= autor de corespondenta)

1. F. Yu, R. Deng, W.H. Tong, L. Huan, N. C. Way, A.I. Badhan, C. Iliescu,* H. Yu, "A perfusion incubator liver chip for 3D cell culture with application on chronic hepatotoxicity testing," *Scientific Reports (Nature)*, **vol. 7**, December 2017, art.no: 14528.
2. M. Ni, G. Tresset, C. Iliescu,* Self-assembled polysulfone nanoparticles using microfluidic chip" *Sensors and Actuators B: Chemical*, **vol. 252, issue 2**, November 2017, pp. 458-462.
3. F. Yu, S. Zhou, Y. Qu, D. Choudhury, Z. Wang, C. Iliescu,* H. Yu, "On chip two-photon metabolic imaging for drug toxicity testing," *Biomicrofluidics*, **vol. 11, issue 3**, May 2017, art. no. 034108.

Seminarii:

1. C. Iliescu, "DNA compaction using hydrodynamic flow focusing" – Yale-NUS College, 18 August 2017, Singapore.
2. C. Iliescu, G. Tresset, C. Marculescu, M.Ni, "Fine Control Of DNA Compaction Using Microfluidics" IMT Bucharest, 29 March 2017
3. C. Iliescu, "Self-assembling of nanoparticle using microfluidics"- Babes- Bolyai University, 28 March 2017. Cluj-Napoca, Romania.

Conferinte:

1. C. Iliescu, G. Tresset, DNA nanoparticles for gene therapy applications, BIGHEART Symposium, 19-20 June 2017, Singapore.
2. C. Iliescu, F.S. Iliescu, F. Yu, "Liver-on-a-chip", Spring Meeting of the Academy of Romanian Scientists, 23-24 March 2017, Bucharest.

ALTE ACTIVITATI:

Membru al colectivului editorial:

- Annals of the Academy of Romanian Scientists, Series on Science and Technology of Information
- Informacije MIDEM- Journal of Microelectronics, Electronic Components and Materials – Slovenia
- Journal of Fluids /Hindawi

Membru CNATDCU (Comisia pentru Inginerie Chimica, Inginerie Medicala, Stiinta Materialelor si Nanomateriale)

Cenzor pentru 27 articole: Sensors and Actuators B: Chemical (7), Microfluidics and Nanofluidics (7), Sensors and Actuators A: Physical (3), Scientific Reports (2), ACS Applied Materials & Interfaces (2), Thermal Science (2), Biomicrofluidics- AIP, Journal of Microelectromechanical Systems, Microsystem Technologies, Therapeutic Delivery,

Evaluator extern:

- **teza de doctorat:** Rebecca Soffe –School of Engineering, Royal Melbourne Institute of

Technology(RMIT), Australia-2017

- **teza de masterat:** Michael Kurdzinski–School of Engineering, Royal Melbourne Institute of Technology (RMIT), Australia (2017)

FRENCH GRANT: (PICS2014): Kinetically-controlled assembly of DNA-based nanoparticles by microfluidic device for gene delivery applications (2014-2017) – Co-PI

Citari: (@31/12/2017)

- ISI Thomson: 1675 citari/113 articole, H-index: 28 (citari in 2017: 149)

11. Prof.univ.dr.ing. Radu Dobrescu, **membru corespondent al Academiei Oamenilor de Știință din** **România**

Raport de activitate 2017

Subsemnatul Radu Dobrescu, profesor la Facultatea de Automatica si Calculatoare din UPB, fac cunoscute mai jos principalele aspecte privind activitatea mea ca membru corespondent al Sectiei de Stiința și Tehnologia Informației în anul 2017.

Principalele obiective pentru activitatea in cadrul sectiei in 2017 au constat in aprofundarea unor aspecte complementare privind:

1. Explicarea modului în care se produce apariția unor noi calități prin emergența ordinii și simetriei într-un proces de evoluție.
2. Definirea principiilor de generare și evoluție ale sistemelor cu auto-organizare și a proprietăților esențiale ale acestora.

Principalele rezultate au fost prezentate intr-o comunicare stiintifica care a fost sustinuta in plenul sectiei in luna septembrie si a fost publicata in Analele STI : R. Dobrescu - Using systems thinking for the management of complexity in service systems, Annals of Academy of Romanian Scientists Series on Science and Technology of Information, Volume 10, no. 2, pp. 59-74, 2017

Propuneri de comunicari stiintifice si alte activitati pentru Planul de activitate al Sectiei STI pe anul 2017

O alta activitatea importanta continuata in 2017 a fost participarea la redactarea monografiei “ISTORIA STIINTEI SI TEHNOLOGIEI INFORMATIEI IN ROMANIA”, materializata prin materialul privind contributia stiintifica relevanta in domeniu. Totodata am participat activ la dezbaterile privind structurarea materialelor si evidentierea unor concepte/ idei/ metode/ solutii/ inventii propuse de oameni de stiinta romani legate de stiinta informatiei si de tehnologia informatiei.

Pentru 2017 doresc să continui ceretarile privind principii de organizare si control ale sistemelor complexe, cu accent pe rolul interactiunilor sociale in transmiterea cunostintelor.

esențiale ale acestora.

In acest sens intentionez sa redactez o comunicare stiintifica care sa poata fi sustinuta in plenul sectiei si sa fie apoi publicata in Analele STI, cu titlul preliminar: „*Scaling Identity Connects Social Interactions*”

LISTA DE LUCRARI 2017

B. ARTICOLE ISI

1. Oscar Martinez Mozos, Virginia Sandulescu, Sally Andrews, David Ellis, Nicola Bellotto, Radu Dobrescu, Jose Manuel Ferrandez, Stress Detection Using Wearable Physiological and Sociometric Sensors, International Journal of Neural Systems, Vol. 27, No. 2, pp. 1650041 (1-16), 2017
DOI: 10.1142/S0129065716500416, IF 6.085
2. R Dobrescu, D Merezeanu - From Information to Knowledge. Transmission of Meaning. Rev. Roum. Sci. Techn.– Électrotechn. et Énerg., Vol. 62, Iss. 1, pp. 115–118, 2017, WOS:000399629400021

Ba. LUCRARI PUBLICATE IN REVISTE DE SPECIALITATE

1. R. Dobrescu - Using systems thinking for the management of complexity in service systems, Annals of Academy of Romanian Scientists Series on Science and Technology of Information, Volume 10, no. 2, pp. 59-74, 2017

Bb. LUCRARI PUBLICATE IN VOLUMELE UNOR MANIFESTARI STIINTIFICE INTERNATIONALE:

ISI proceedings

1. C. E. Poenaru, D. Merezeanu, R. Dobrescu, E. Posdarascu - Communication Issues in E-Health Context, The 6th IEEE International Conference on E-Health and Bioengineering, 2017, pp.33-36
2. C. E. Poenaru, D. Merezeanu, R. Dobrescu, E. Posdarascu - Advanced Solutions for Medical Information Storing: Clinical Data Warehouse, The 6th IEEE International Conference on E-Health and Bioengineering, 2017, pp.37-40
3. A. Th. Dumitrescu, E. Oltean, D. Merezeanu, R. Dobrescu - Emergence in Hierarchical Complex Systems Structured as Social Networks, 21st International Conference on Control Systems and Computer Science (CSCS), 2017, DOI: 10.1109/CSCS.2017.66
4. C. E. Poenaru, D. Merezeanu, R. Dobrescu - Fractal Organization in Healthcare Information Systems, 21st International Conference on Control Systems and Computer Science (CSCS), 2017

Alte BDI

1. L. Ichim, R. Dobrescu - Improved Cancer Diagnosis with Fractal Analysis of Cellular Automata Models, Proc. of the 14th European Workshop on Advanced Control and Diagnosis, 2017

2. Theodora Dumitrescu, Razvan Popescu, Cristina Poenaru, Magdalena Anghel Clinical Decision Support System for Health Data Quality Assessment, L. Ichim, R. Dobrescu - Improved Cancer Diagnosis with Fractal Analysis of Cellular Automata Models, Proc. of the 14th European Workshop on Advanced Control and Diagnosis, 2017

C. CARTI sau Capitole in carti

1. R. Dobrescu, D. Merezeanu - Simulation Platform for Virtual Manufacturing Systems, in Th. Borangiu, A. Thomas and D. Trentesaux, Eds., Springer book series "Studies in Computational

Intelligence vol. 694", volume Service Orientation in Holonic and Multi-Agent Manufacturing, p.395-404 Springer Verlag, 2017

Brevet

1. R. Dobrescu, D. Popescu, M. Nicolae, C. Vasilescu – Cuplor multifunctional pentru interfețe de proces, Patent Number: RO 127056 B1 din 30.08.2017

Proiecte de cercetare

Soluție pentru integrarea eficientă a centralelor eoliene și fotovoltaice în sistemul energetic național (INOVATION)

Citari

I – 3 cit.

Radu Dobrescu, Loretta Ichim, Daniela Crișan, Diagnosis of breast cancer from mammograms by using fractal measures, International Journal of Medical Imaging, 1(2), pp. 32-38, 2013; doi: 10.11648/j.ijmi.20130102.14

1. Wenda He, Sam Harvey, Arne Juetten, Erika R. E. Denton, Reyer Zwiggelaar, Mammographic Segmentation and Density Classification: A Fractal Inspired Approach, Book Chapter, in Breast Imaging, Volume 9699 of the series Lecture Notes in Computer Science pp 359-366, 2016

2. P. Shanmugavadivu, V. Sivakumar, Rashmi Sudhir, Fractal dimension-bound spatio-temporal analysis of digital mammograms, The European Physical Journal Special Topics, February 2016, Volume 225, Issue 1, pp 137-146

3. R. M. Farouk, M. E. Abdel Aziz, S. A. Habib - Medical images analysis based on fractal dimension and wavelet transform, Journal of Computer Science Approaches, vol.2, no.1., pp. 1-5, 2016

II – 1 cit.

R. Dobrescu, F. Talos, and C. Vasilescu, Using fractal dimension for cancer diagnosis, IEEE Proceedings of Video/Image Processing and Multimedia Communications 4th EURASIP-IEEE Region 8 International Symposium (VIPromCom), pp. 173-176, 2002.

Citata in

Fabiano L. Ribeiro, Renato Vieira dos Santos, and Angelica S. Mata, Fractal Dimension and Universality in Avascular Tumor Growth, arXiv preprint arXiv:1610.05789, 2016

III – 1 cit.

Florea, G., Dobrescu, R., Popescu, D., Ocheana, L., Rohat, O.: PH Center a step to the next generation of process control architecture. In: Proceedings of the 11th WSEAS International Conference on Systems Theory and Scientific Computation, Aug 2011

Citata in

Oana Chenaru, Dan Popescu, Execution of an IEC61499 Application on a Remote Server, Recent Advances in Systems Safety and Security, Volume 62 of the series Studies in Systems, Decision and Control pp 157-177, 2016

IV – 1 cit.

G. Florea, R. Dobrescu, Risk and Hazard Control the new process control paradigm, Communications, Circuits and Educational Technologies (2011), pp. 141-149 ISBN: 978-1-61804-231-6

Citata in

Reinaldo Squillante Jr, Diolino J.S. Filho, Robson Marinho da Silva Jeferson A.L. Souza, Fabrício Junqueira, Paulo E. Miyagi, A Novel Safety Control Hierarchical Architecture for Prevention and Mitigation of Critical Faults in Process Industries based on Defense-in-depth, Reactive Systems and Safety-diagnosability, 15th IFAC Symposium on Information Control Problems in Manufacturing – INCOM 2015, Volume 48, Issue 3, 2015, Pages 1326-1331

V – 1 cit.

D. Popescu, D. Patirniche, R. Dobrescu, M. Nicolae, and M. Dobrescu. Real Time Mobile Object Tracking Based on Chromatic Information. In Proceedings of the International Conference on Remote Sensing (REMOTE'09), pages 13--18, Oct. 2009.

Citata in

Ami Hayashi, Yuta Tokusashi, Hiroki Matsutani, A Line Rate Outlier Filtering FPGA NIC using 10GbE Interface, Newsletter ACM SIGARCH Computer Architecture News - HEART '15 archive, Volume 43 Issue 4, September 2015, Pages 22-27

VI– 2 cit.

Vasilescu C, Giza DE, Petrisor P, Dobrescu R, Popescu I, Herlea V (2012) Morphometrical differences between resectable and non-resectable pancreatic cancer: a fractal analysis. Hepatogastroenterol 59:284–288 DOI 10.5754/hge11277

Citata in

1. Anna Scampicchio, Andrea Tura, Stefano Sbrignadello, Fabio Grizzi, Sirio Fiorino, Stella Blandamura, Lorenzo Finesso, Assessment of the Fractal Dimension of Images Derived by Biopsy of Pancreatic Tissue: Implications for Tumor Diagnosis, Chapter, XIV Mediterranean Conference on Medical and Biological Engineering and Computing, Volume 57 of the series IFMBE Proceedings pp 393-398,2016

2. J. Vasiljevic, N. Zivic, J. Pribic, K. Kanjer, W. Jonakowski, J. Sopta, D. Nikolic-Vukosavljevic and M. Radulovic - Medical imaging multifractal analysis in prediction of efficiency of cancer therapy, in Computer Science & Information Technology, N.Meghanathan et al. (Eds), 2016

VII– 1 cit.

Branescu, I., Purcarea, V.L., Dobrescu, R. Solutions for medical databases optimal exploitation, Journal of Medicine and Life, Vol. VII, Iss 1, January-March 2014, p.109-118

Citata in

Naiara Muro, Eider Sanchez, Carlos Toro, Eduardo Carrasco, Sebastián A. Ríos, Frank Guijarro, and Manuel Graña, Experience-Based Electronic Health Records. Cybernetics And Systems Vol. 47 , Iss. 1-2,2016

VIII – 1 cit.

Dobrescu R, Popescu D, Nicolae M, Mocanu S (2009) Hybrid wireless sensor network for homecare monitoring of chronic patients. Int J Biol Biomed Eng 3(2):19–26

Citata in

Ştefan Mocanu, Dedicated BSN for Personal Indoor Monitoring, Chapter in Soft Computing Applications, Volume 356 of the series Advances in Intelligent Systems and Computing, pp 267-278, 2015

IX – 3 cit.

R.Dobrescu, M.Dobrescu, S.Mocanu and D.Popescu,"Medical images classification for skin cancer diagnosis based on combined texture and fractal analysis," WSEAS Trans.Biology and Biomedicine, vol.7,pp.223-232, 2010.

Citata in

1. R. M. Farouk, M. E. Abdel Aziz, S. A. Habib - Medical images analysis based on fractal dimension and wavelet transform, Journal of Computer Science Approaches, vol.2, no.1., pp. 1-5, 2016

2. R. Singh, P. Shah, J. Bagade - Skin texture analysis using machine learning, IEEE Conference on Advances in Signal Processing (CASP), 2016

3. E. Hadzieva, D. Bogatinoska, R. Petroski, M. Shuminoska, L. Gjergjeska, A. Karadimce and V. Trajkova - Is the Fractal Dimension of the Contour-lines a Reliable Tool for Classification of Medical Images?, MATEC Web of Conferences, vol. 76, no. 05002, pp. 1-8, 2016

X. – 1 cit.

G. Florea , O. Chenaru , R. Dobrescu , D. Popescu , “ Evolution from Power Grid to Smart Grid: Design Challenges ”, 19th International Conference on System Theory, Control and Computing (ICSTCC 2015) , pp. 912 – 916, 2015

Citata in

C. Vlad, M. Barbu, R. Vilanova - Fuzzy control of an electrical energy generation system based on renewable sources, IEEE 21st International Conference on Emerging Technologies and Factory Automation (ETFA), 2016

XI. – 2 cit.

O. Chenaru, A. Stanciu, D. Popescu, V. Sima, G. Florea, R. Dobrescu, Open cloud solution for integrating advanced process control in plant operation, Proc. of 23th Mediterranean Conference on Control and Automation (MED), pp. 973-978, 2015

Citata in

1. G. Manea, S. Popa - Integration of sensor networks in cloud computing, U.P.B. Sci. Bull., Series C, Vol. 78, Iss. 2, pp. 13-22, 2016

2. C. Simion, O. Chenaru, G. Florea, J. I. Lozano, S. Nabulsi, M. Reis, J. Cassidy - Decision Support System based on Fuzzy Control for a Wastewater Treatment Plant, International Journal of Environmental Science, vol.1, pp.344-349, 2016

XII. – 1cit.

D. Popescu, L. Ichim, and R. Dobrescu, “Sliding box method for automated detection of the optic disc and macula in retinal images,” LNCS, vol. 9043, pp. 250-261, 2015

Citat in:

D. Popescu, L. Ichim, T. Caramihale - Detection of exudates and hemorrhages using an efficient criterion for feature selection, IEEE 39th International Conference on Telecommunications and Signal Processing (TSP), 2016

12. Prof.univ..Em. Dr. Ing. h.c. Sergiu Stelian ILIESCU **membru asociat al Academiei Oamenilor de Știință din România**

RAPORT de ACTIVITATE

In sedinta Consiliului Stiintific al Academiei Oamenilor de Stiinta din Romania din data de 26 Mai 2016 mi s-a conferit titlul de **membru asociat** al Academiei Oamenilor de Stiinta din Romania.

Incepand cu acest moment am participat, cu exceptia unei intalniri, la toate sedintele lunare ale sectiei.

Activitatea stiintifica a mea pe anul 2017 poate fi rezumata la:

Lucrari in reviste cotate ISI, Q1/Q2

- Stamatescu Iulia, Arghira Nicoleta, Făgărășan Ioana, Stamatescu Grigore, **Iliescu Sergiu Stelian**, Calofir Vasile. *Decision Support System for a Low Voltage Renewable Energy System*. Energies, Vol. 10, pp.118, 2017.

Lucrari din Proceedings de conferinte cotate ISI

- Calofir Vasile, Fagarasan Ioana, Arghira Nicoleta, Stamatescu Iulia, Stamatescu Grigore, **Iliescu Sergiu Stelian**, Hossu Daniela. *Training With Real Time Simulator For Smart Specialization*. The International Scientific Conference eLearning and Software for Education, Vol.2, pp.331, 2017.
- Hossu Daniela, Fagarasan Ioana, **Iliescu Sergiu Stelian**, Hossu Andrei, Stamatescu Grigore, Stamatescu Iulia, Arghira Nicoleta, Calofir, Vasile. *Architecture For Research, Training And Education In Control Engineering*. The International Scientific Conference eLearning and Software for Education, Vol.2, pp.365, 2017.
- Marinescu Tiberiu, Arghira Nicoleta, Hossu Daniela, Fagarasan Ioana, Stamatescu Iulia, Stamatescu Grigore, Calofir Vasile, **Iliescu Sergiu Stelian**. *Advanced control strategies for irrigation systems*. The 9th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS). Vol. 2, pp.843-848, 2017.
- Stamatescu Iulia, Stamatescu Grigore, Fagarasan Ioana, Arghira Nicoleta, Calofir Vasile, **Iliescu Sergiu Stelian**. *ASID: Advanced system for process control towards intelligent specialization in the power engineering field*. The 9th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS). Vol. 2, pp. 475-480, 2017.
- Ioana Fagarasan, Iulia Stamatescu, Cristina Nichiforov, Grigore Stamatescu, Nicoleta Arghira, **Sergiu Stelian Iliescu**. *Laboratory Scale Wind Energy Harvester*. The 9th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS), 2017, Bucharest, Romania.
- Mihaela Puianu, Ramona-Oana Flangea, Nicoleta Arghira, **Sergiu Stelian Iliescu**. *Microgrid simulation for smart city*. The 9th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS), 2017, Bucharest, Romania.
- Mihaela Puianu, Ramona-Oana Flangea, Nicoleta Arghira, **Sergiu Stelian Iliescu**. *PV Panel-Wind Turbine Hybrid System Modelling*. The 21th International Conference on Control Systems and Computer Science (CSCS), pp. 636-640, 2017, Bucharest, Romania.
- Ioana Fagarasan, Iulia Stamatescu, Nicoleta Arghira, Daniela Hossu, Andrei Hossu, **Sergiu Stelian Iliescu**. *Control Techniques and Strategies for Microgrids: Towards an Intelligent Control*. The 21th International Conference on Control Systems and Computer Science (CSCS), pp. 630-635, 2017, Bucharest, Romania.

Lucrari din Proceedings de conferinte necotate ISI

Carti si capitole din carti in edituri din tara

Director de proiecte de cercetare nationale

1. PN-III-P2-2.1-BG-2016-0387, 82BG/2016,
Titlu proiect: *Sistem de Automatizare si Telemetrie Eficient energetic pentru managementul Resurselor in Agricultura de precizie (SA-TERRA)*.
2. PN-II-PT-PCCA-2011-3.2-1616, 42/2012 *Sistem inteligent de asistate a deciziilor aplicat în rețelele electrice de joasă tensiune cu producere distribuită din surse de energie regenerabilă” (InDeSEn)*.

Membru in proiecte de cercetare nationale

- PN-III-P2-2.1-BG-2016-0234 , 72BG/2016,
Titlu proiect (Romana): *Sistem Avansat de conducere a proceselor pentru Specializare Inteligenta in Domeniul energetic (ASID)*.
- PN-III-CERC-CO-PTE, 22PTE/2016,
Titlu proiect: *Solutie pentru integrarea eficienta a centralelor eoliene si fotovoltaice in sistemul energetic national - INOVATION*.
- PN-III-P2-2.1-CI-2017-0376

- Titlu proiect: *Sistem Inteligent de Incarcare pentru Vehicule Electrice (IEVSE)*
- PN-III-P2-2.1-CI-2017-0484
- Titlu proiect: *Gateway multi-protocol pentru automatizare deschisa in cladiri inteligente (OPENBMS)*

Activitati in cadrul AOSR

- Participare cu lucrare la Sesiunea Stiintifica de Primavara 2017 a AOSR, Bucuresti 24 martie 2017
- Titlul lucrării: ”Conducerea proceselor (tehnice) dintr-un sistem electroenergetic (SEE): Clasic și modern în automată și IT&C”, autori: **Sergiu Stelian Iliescu**, Nicoleta Arghira, Ioana Fagarasan, Iulia Stamatescu

Chair la conferinte stiintifice

*Workshop Chair

- *International Workshop on Advance Control in Smart Grid – ACSG 2017 din CSCS 21, 2017.*

Membru in comitetul de organizare / conferintei / etc.

- Membru in Comitetul International de Program CSCS 21 – 29 – 31 mai 2017.
- Membru in Comitetul International de Program și de organizare al conferinței IEEE IDAACS 21-23 septembrie 2017.

Gradul I si II pentru profesorii din invatamantul preuniversitar

- Conducator stiintific: o lucrare;
- Presedinte Comisie de sustinere lucrare grad I: o lucrare;
- Membru in comisia de examinare grad I: februarie 2017.

Alte activitati

- Conducere lucrari de licenta + dizertatie: iunie/iulie 2017.
- Membru in comisia de sustinere a lucrarilor de dizertatie: CPRU, AII (master).
- Conferinta SMART CITIES of Romania, Smart Education & Training, organizata de Parlamentul Romaniei impreuna cu SNSPA, Panel II, Sergiu St. LILIESCU – *Prolegomena la realizarea unui SMART City.*

Reviste

- **Bord editorial (Editorial Board)**
- Scientific Bulletin, Seria C: Electrical Engineering and Computer Science, Universitatea POLITEHNICA din Bucuresti
- Revista Automatizari si Instrumentatie (Asociatia pentru Automatizari si Instrumentatie din Romania)
- **Comitet executiv (Executiv Committee) din sept. 2016**
- Control Engineering and Applied Informatics (CEAI), Romanian Society of Automatic Control and Tehnical Informatics (SRAIT)

Review la reviste

- Scientific Bulletin, Seria C, Universitatea POLITEHNICA din Bucuresti
- Control Engineering and Applied Informatics

Lucrari in reviste nationale (neindexate ISI)

- Tiberiu Marinescu, **Sergiu Stelian Iliescu**, Ioana Făgărășan, Nicoleta Arghira, Iulia Stamatescu, , Vasile Calofir, Iulia Stamatescu, Grigore Stamatescu. *Automatica subsistemului de racire al unei otelarii.* Revista Asociației pentru Automatizări și Instrumentație din România, Nr. 1, 2017.

- Tiberiu Matinescu, **Sergiu Stelian Ilescu**, Ioana Făgărășan, Nicoleta Arghira, Iulia Stamatescu, George Suciuc, Andrei Vasilescu, Adrian Pasat. *Solutii de automatizare pentru sistemele de irigații*. Revista Asociației pentru Automatizări și Instrumentație din România, Nr. 2, 2017.
- Cristina Nichiforov, **Sergiu Stelian Ilescu**, Ioana Făgărășan, Nicoleta Arghira, Vasile Calofir, Iulia Stamatescu, Grigore Stamatescu. *Monitorizarea și predicția consumului de energie utilizând modele de tip ARIMA și Rețele Neuronale Artificiale*. Revista Asociației pentru Automatizări și Instrumentație din România, Nr. 3, 2017.

13. Conf.dr.ing. Mihai Dascalu,
membre asociat al Academiei Oamenilor de Știință din România

Raport individual de activitate pe anul 2017

Capitole de cărți publicate

1. Dessus, P., Simon, J.-P., Dascalu, M., & Trausan-Matu, S. (2017). ReaderBench: Un outil d'aide à l'analyse de discussions philosophiques. In J.-P. Simon & M. Tozzi (Eds.), *Paroles de philosophes en herbe - Regards croisés de chercheurs sur une discussion sur la justice en CM2* (pp. 151–171). Grenoble, France: UGA Éditions.
2. McNamara, D. S., Allen, L. K., Crossley, S. A., Dascalu, M., & Perret, C.A. (2017). Natural Language Processing and Learning Analytics. In C. Lang, G. Siemens, A. Wise & D. Gasevic (Eds.), *Handbook of Learning Analytics* (pp. 93–104): Society for Learning Analytics Research.

Articole în reviste ISI

1. Dascalu, M., McNamara, D. S., Trausan-Matu, S., & Allen, L.K. (2017). Cohesion Network Analysis of CSCL Participation. *Behavior Research Methods*, 1–16. doi: 10.3758/s13428-017-0888-4
2. Crossley, S. A., Skalicky, S. C., Dascalu, M., Kyle, K., & McNamara, D. S. (2017). Predicting text comprehension, processing, and familiarity in adult readers: New approaches to readability formulas. *Discourse Processes*, 54(5-6), 340–359.
3. Denislam, S., Dascalu, M., & Trausan-Matu, S. (2017). Predicting Collaboration based on Students' Pauses in Online CSCL Conversations. *University Politehnica of Bucharest Scientific Bulletin Series C-Electrical Engineering and Computer Science*, 79(2), 83–92.
4. Stavarache, L. L., Balint, M., Dascalu, M., Trausan-Matu, S., & Nistor, N. (2017). BlogCrawl: Customized Crawling of Online Communities. *University Politehnica of Bucharest Scientific Bulletin Series C-Electrical Engineering and Computer Science*, 79(2), 3–14.

Articole publicate în proceedings-uri ISI Thomson

1. Corlatescu, D., Paraschiv, I. C., Dascalu, M., Trausan-Matu, S., & Nistor, N. (2017). Predicting through Writing Style the Impact of Blog Posts in Online Communities. In *16th Int. Conf. on Networking in Education and Research (RoEduNet)*. Targu Mures, Romania: IEEE.

2. Dascalu, M., Dessus, P., Thuez, L., & Trausan-Matu, S. (2017). How well do Student Nurses Write Case Studies? A Cohesion-Centered Textual Complexity Analysis. In E. Lavoué, H. Drachsler, K. Verbert, J. Broisin & M. Pérez-Sanagustín (Eds.), *12th European Conference on Technology Enhanced Learning (EC-TEL 2017)* (pp. 43–53). Tallinn, Estonia: Springer.
3. Dascalu, M., Gutu, G., Ruseti, S., Paraschiv, I. C., Dessus, P., McNamara, D. S., Crossley, S., & Trausan-Matu, S. (2017). ReaderBench: A Multi-Lingual Framework for Analyzing Text Complexity. In E. Lavoué, H. Drachsler, K. Verbert, J. Broisin & M. Pérez-Sanagustín (Eds.), *12th European Conference on Technology Enhanced Learning (EC-TEL 2017)* (pp. 495–499). Tallinn, Estonia: Springer.
4. Nistor, N., Dascalu, M., Gutu, G., Trausan-Matu, S., Choi, S., Haberman-Lawson, A., Brands, B., Korner, C., & Koletzko, B. (2017). Mass Customization in Continuing Medical Education: Automated Extraction of E-Learning Topics. In E. Lavoué, H. Drachsler, K. Verbert, J. Broisin & M. Pérez-Sanagustín (Eds.), *12th European Conference on Technology Enhanced Learning (EC-TEL 2017)* (pp. 576–579). Tallinn, Estonia: Springer.
5. Toma, I., Alexandru, C.-E., Dascalu, M., Dessus, P., & Trausan-Matu, S. (2017). Semantic Boggle: A Game for Vocabulary Acquisition. In E. Lavoué, H. Drachsler, K. Verbert, J. Broisin & M. Pérez-Sanagustín (Eds.), *12th European Conference on Technology Enhanced Learning (EC-TEL 2017)* (pp. 606–609). Tallinn, Estonia: Springer.
6. Dascalu, M., Jacovina, M., Soto, C. M., Allen, L. K., Dai, J., Guerrero, T. A., & McNamara, D. S. (2017). Teaching iSTART to Understand Spanish. In A. E. R. Baker, X. Hu, M. M. T. Rodrigo & B. du Boulay (Eds.), *18th Int. Conf. on Artificial Intelligence in Education (AIED 2017)* (pp. 485–489). Wuhan, China: Springer.
7. Dascalu, M., Westera, W., Ruseti, S., Trausan-Matu, S., & Kurvers, H. (2017). ReaderBench Learns Dutch: Building a Comprehensive Automated Essay Scoring System for Dutch. In A. E. R. Baker, X. Hu, M. M. T. Rodrigo & B. du Boulay (Eds.), *18th Int. Conf. on Artificial Intelligence in Education (AIED 2017)* (pp. 52–63). Wuhan, China: Springer.
8. Gutu, G., Dascalu, M., Ruseti, S., Rebedea, T., & Trausan-Matu, S. (2017). Unlocking the Power of Word2Vec for Identifying Implicit Links. In *17th IEEE Int. Conf. on Advanced Learning Technologies (ICALT2017)* (pp. 199–200). Timisoara, Romania: IEEE.
9. Gutu, G., Dascalu, M., Trausan-Matu, S., Heutelbeck, D., Hemmje, M., Westera, W., & Trausan-Matu, S. (2017). Semantic Annotation and Automated Text Categorization using Cohesion Network Analysis. In *5th Int. Workshop on Semantic and Collaborative Technologies for the Web, in conjunction with the 13th Int. Conf. on eLearning and Software for Education (eLSE 2017)* (pp. 25–32). Bucharest, Romania: Advanced Distributed Learning Association.
10. Paraschiv, I. C., Dascalu, M., Banica, C. K., & Trausan-Matu, S. (2017). Designing a Scalable Technology Hub for Researchers. In *5th Int. Workshop on Semantic and Collaborative Technologies for the Web, in conjunction with the 13th Int. Conf. on eLearning and Software for Education (eLSE 2017)* (pp. 13–18). Bucharest, Romania: Advanced Distributed Learning Association.
11. Gutu, G., Dascalu, M., Trausan-Matu, S., & Lepoivre, O. (2017). How Adequate is your CV? Analyzing French CVs with ReaderBench. In *3rd Int. Workshop on Design and Spontaneity in Computer-Supported Collaborative Learning (DS-*

- CSCL-2017), in conjunction with the 21th Int. Conf. on Control Systems and Computer Science (CSCS21) (pp. 559–565). Bucharest, Romania: IEEE.
12. Paraschiv, I. C., Dascalu, M., Trausan-Matu, S., Nistor, N., Montes de Oca, A. M., & McNamara, D. S. (2017). Semantic Similarity versus Co-authorship Networks: A Detailed Comparison. In *3rd Int. Workshop on Design and Spontaneity in Computer-Supported Collaborative Learning (DS-CSCL-2017), in conjunction with the 21th Int. Conf. on Control Systems and Computer Science (CSCS21)* (pp. 566–570). Bucharest, Romania: IEEE.
 13. Nistor, N., Panaite, M., Dascalu, M., & Trausan-Matu, S. (2017). Identifying Socio-cognitive Structures in Online Knowledge Communities (OKCs) using Cohesion Network Analysis. In *9th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC 2017)*. Timisoara, Romania: IEEE.
 14. Sirbu, M. D., Panaite, M., Secui, A., Dascalu, M., Nistor, N., & Trausan-Matu, S. (2017). ReaderBench: Building Comprehensive Sociograms of Online Communities. In *9th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC 2017)*. Timisoara, Romania: IEEE.

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3. Nistor, N., Dascalu, M., Dessus, P., & Trausan-Matu, S. (2017). *Conceptual Ground and Findings Overview of the Polyphonic Analysis of Knowledge Building Dialogs*. Paper presented at the 17th Biennial EARLI Conference, Tampere, Finland.
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1. Dascalu, M. (2017). *Multi-lingual Analyses of Text Complexity Using ReaderBench*. Paper presented at the 1st Conference on Recent Advances in Artificial Intelligence (RAAI 2017), Bucharest, Romania.

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1. Proiect H2020 RAGE (Director de proiect)
2. COST Action TEXTLINK (Membru Management Committee)
3. COST Action „Republic of Letters” (Membru supleant Management Committee)

Proiecte naționale

1. Proiect POC G NETIO (Manager Operațional)
2. Proiect POC D HUB-TECH (Director de proiect)
3. Granturi interne de cercetare ale Universitatii Politehnica din Bucuresti, Programul UPB – GEX (Director de proiect)

Membru în comitete științifice la conferințe internaționale

- LAK 2017, CSCL 2017, EC-TEL 2017, ICALT 2017, SLERD 2017, CSCS21-2017, RoCHI 2017, ICC'2017

Recenzor la reviste internaționale cotate ISI

- Behavior and Research Methods, Springer
- Computers and Education, Elsevier
- Computers in Human Behavior, Elsevier
- Information Sciences, Elsevier
- Scientific Bulletin, UPB
- Plos One Journal
- Soft Computing Journal, Springer

V. Concluzii

1. Activitatea Secției STI s-a desfășurat conform Planului de activitate.
2. Au fost îndeplinite obiectivele propuse pentru anul 2017.
3. Din rapoartele individuale de activitate rezulta contribuția importantă a membrilor Secției STI la creșterea prestigiului AOSR în țară și în străinătate.

*Prof.univ.dr.ing.Paul Sterian,
Președintele Secției STI
Cosilier, ing. Mihai Carutasu,
/Secretarul Secției STI*

30. 01. 2018