30.04.2018

Către Serviciul Cercetare-Dezvoltare-Inovare,

Ca urmare a solicitării centralizării Rapoartelor de activitate ale Centrelor de cercetare, vă transmitem Raportul de activitate a Centrului de cercetare *Sisteme Integrate de Conversie a Energiei și Conducere Avansată a Proceselor Complexe*- **SICECAPC** pe anul-2017, alături de anexe.

Director Centru SICECAPC,

Prof.univ.dr. habil.ing. Marian Găiceanu

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
CONSILIUL NAȚIONAL AL CERCETĂRII ȘTIINȚIFICE DIN ÎNVĂȚĂMÂNTUL SUPERIOR

CERTIFICAT

Consiliul Național al Cercetării Științifice din Învățământul Superior

recunoaște

Centrul de Cercetare

tip C

SISTEME ELECTROMECANICE INFORMATIZATE IN DOMENIUL NAVAL (SEIDN)

DIRECTOR: CALUEANU DUMITRU

UNIVERSITATEA DUNAREA DE JOS DIN GALATI

Președintele CNCSIS
Ioan Dumitrache

București, 14-V-2002

Certificat nr. 142- CC-C

LISTA MEMBRILOR CENTRULUI DE CERCETARE SICECAPC

Tabelul nr. 1

Nr. crt.	Grad didactic/Prenume/Nume	Funcția ocupată în cadrul centrului*
1.	Prof.dr.habil.ing. Marian Găiceanu*	Director
2.	Conf.dr.ing. Gelu Gurguiatu	Director științific
3.	Conf.dr.ing. Ion Voncilă	Secretar centru
4.	Prof.dr.ing. Adrian Filipescu	Responsabil laborator
5.	Prof.dr.ing. Nicolae Badea	Responsabil laborator
6.	Prof.dr.ing. Toader Munteanu	Responsabil laborator
7.	Conf.dr.ing. Ciprian Vlad	Responsabil laborator
8.	Ș.l.dr.ing. Romeo Păduraru	Responsabil laborator
9.	Ș.l.dr.ing. Traian Munteanu	Responsabil laborator
10.	Ș.l.dr.ing. Ion Paraschiv	Responsabil laborator
11.	Prof.dr.ing. Grigore Fetecău **	Membru
12.	Prof.emerit dr.ing. Emil Roșu **	Membru
13.	Prof.dr.ing. Mariana Dumitrescu	Membru
14.	Conf.dr.ing. Sergiu Ivas	Membru
15.	Conf.dr.ing. Grigore Vasiliu	Membru
16.	Ș.l.dr.ing. Teodor Dumitriu	Membru
17.	Ș.l.dr.ing. Ciprian Bălănuță	Membru
18.	Ș.l.dr.ing. Adriana Burlibașa	Membru
19.	Ș.l.dr.ing. Mădălin Costin	Membru
20.	As.dr.ing. Cristinel Dache	Membru
21.	As.dr.ing. Elena Selim	Membru
22.	Drd.ing. Răzvan Buhosu	Membru
23.	Drd.ing. Mihai Crețu	Membru
24.	Drd.ing. George Ciubucciu	Membru
25.	Drd.ing. George Petrea	Membru
26.	Dr.ing. Adriana Filipescu	Membru
27.	Drd. ing. Iulian Ghenea	Membru

*Director/Coordonator

**Profesor asociat

ANEXE

RAPORT ACTIVITATE

(2017)

Centrul de cercetare instituționalizat Sisteme Integrate de Conversie a Energiei și Conducere Avansată a Proceselor Complexe- **SICECAPC**

8.1.1 Lucrări publicate în reviste cotate ISI.

Nr. crt.	Titlu articol*	Nume, prenume autor(i) articol	Revista/Volum ISI Proocedings	Tip**	ISSN	Cod DOI (Digital Object Identifier) / WOS
1	Multiprocesor visual servoing system for mobile robots servicing mechatronic lines	Petrea George Nicolau Viorel Andrei Mihaela	IEEE 23rd Int. Symposium for Design and Technology in Electronic Packaging (SIITME),	3	978-1-5386-1626-0	DOI:10.1109/SIITME.2017.8259869
2	Solar cooling - comparative study between thermal and electrical use in industrial buildings	N Badea, G V Badea, A Epureanu, G Frumuşanu	IOP Conference Series: Materials Science and Engineering	1	ISSN: 1757-8981	DOI: 10.1088/1757-899X/145/2/022027/WOS:000396437600027
3	Energy-optimal programming and scheduling of the manufacturing	N Badea, A Epureanu, G Frumuşanu	IOP Conference Series: Materials Science and Engineering	1	ISSN: 1757-8981	DOI: 10.1088 /1757-899X/145/2/022028/WOS:000396437600028
4	ECONOMIC EFFICIENCY COMPUTING FOR FAILURE - TOLERANT TECHNICAL SYSTEMS USING ARTIFICIAL INTELLIGENCE	Dumitrescu Mariana	Proceedings of the 16th International Conference on INFORMATICS in ECONOMY (IE 2017) Education, Research & Business Technologies	3	ISSN: 2247 – 1480	WOS:000418463600076
5	Urban Cycle Simulator for Electric Vehicles Applications	Gaiceanu, Marian; Buhosu, Razvan; Statescu, Sorin	3RD INTERNATIONAL CONGRESS ON ENERGY EFFICIENCY AND ENERGY RELATED MATERIALS (ENEFM2015) Book Series: Springer Proceedings in Energy	3	ISSN: 2352-2534	DOI: 10.1007/978-3-319-45677-5_6/WOS:000405208700006

6	Optimal Control of the DC Motors with Feedforward Compensation of the Load Torque	Gaiceanu, Marian	3RD INTERNATIONAL CONGRESS ON ENERGY EFFICIENCY AND ENERGY RELATED MATERIALS (ENEFM2015) Book Series: Springer Proceedings in Energy	3	ISSN: 2352-2534	DOI: 10.1007/978-3-319-45677-5_4/ WOS:000405208700004
7	Photovoltaic Power Conversion System as a Reserve Power Source to a Modern Elevator	Gaiceanu, Marian; Nichita, Cristian; Statescu, Sorin	3RD INTERNATIONAL CONGRESS ON ENERGY EFFICIENCY AND ENERGY RELATED MATERIALS (ENEFM2015) Book Series: Springer Proceedings in Energy	3	ISSN: 2352-2534	DOI: 10.1007/978-3-319-45677-5_5/WOS:000405208700005
8	Experimental prototype of an electric elevator	Găiceanu Marian, Epure Silviu, Ciuta Ştefan	IOP Conference Series: Materials Science and Engineering	1	ISSN: 1757-8981	DOI: 10.1088/1757-899X/145/4/042027, WOS:000396437600079, IDS Number: BH0TA
	** (1) Revista cotată WOS; (2) Revista indexata WOS; (3) ISI Proceedings*					

8.1.2 Factor de impact cumulat al lucrărilor cotate ISI

1. Vlad Ciprian, Barbu Marian, Vilanova Ramon, Intelligent control of a distributed energy generation system based on renewable sources, Sustainability Journal, ISSN: 2071-1050, 2016, Factor impact: 1.343 raportat in 2016 - Factor impact real in 2016 : 1.789→ diferenta de factor de impact = 0.446 http://www.mdpi.com/journal/sustainability/stats

8.1.3 Citări în reviste de specialitate cotate ISI.

1.	1. The Lateral Tracking Control for the Intelligent Vehicle Based on Adaptive PID Neural Network, SENSORS, Volume: 17, Issue: 6, Article Number: 1244, DOI: 10.3390/s17061244, Published: JUN 2017

2.	2. Enhancing the yaw stability and the manoeuvrability of a heavy vehicle in difficult scenarios by an emergency threat avoidance manoeuvre, PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART D-JOURNAL OF AUTOMOBILE ENGINEERING, Volume: 231, Issue: 5, Pages: 615-637, DOI: 10.1177/0954407016658808, Published: APR 2017
3.	3. Adaptive Fuzzy-PD Tracking Controller for Optimal Visual-Servoing of Wheeled Mobile Robots, CONTROL ENGINEERING AND APPLIED INFORMATICS, Volume: 19, Issue: 3, Pages: 58-68, Published: SEP 2017
4.	4. A robust adaptive fuzzy variable structure tracking control for the wheeled mobile robot: Simulation and experimental resultsCONTROL ENGINEERING PRACTICE, Volume: 64, Pages: 27-43, DOI: 10.1016/j.conengprac.2017.04.006, Published: JUL 2017
5.	5. Tracking Control for Mobile Robots Considering the Dynamics of All Their Subsystems: Experimental Implementation, COMPLEXITY, Article Number: 5318504, DOI: 10.1155/2017/5318504, Published: 2017
6.	6.Adaptive PSO-LS-wavelet H_∞ control for two-wheeled self-balancing scooter, International Journal of Control, Automation and Systems, Volume 15, Issue 5, 1 October 2017, Pages 2126-2137**ISSN:** 15986446, **DOI:** 10.1007/s12555-016-0001-2
7.	7. Consensus of a class of discrete-time nonlinear multi-agent systems in the presence of communication delays, ISA TransactionsVolume 71, November 2017, Pages 10-20**ISSN:** 00190578, **CODEN:** ISATA, **DOI:** 10.1016/j.isatra.2017.01.002
8.	8 A robust adaptive fuzzy variable structure tracking control for the wheeled mobile robot: Simulation and experimental results, Control Engineering Practice,Volume 64, 1 July 2017, Pages 27-43, **ISSN:** 09670661, **CODEN:** COEPE, **DOI:** 10.1016/j.conengprac.2017.04.006
9.	9. Practical implementation of a simple and effective robust adaptive fuzzy variable structure trajectory tracking control for differential wheeled mobile robots, International Journal of Innovative Computing, Information and Control, Volume 13, Issue 1, 1 February 2017, Pages 341-364, **ISSN:** 13494198
10	10. Decentralized safe conflict resolution for multiple robots in dense scenarios, Robotics and Autonomous Systems, Volume 91, 1 May 2017, Pages 179-193, **ISSN:** 09218890, **CODEN:** RASOE, **DOI:** 10.1016/j.robot.2017.01.008
11	11. Robust control of a redundant wheeled drive system for energy saving and fail safe motion, Advances in Mechanical Engineering, Volume 9, Issue 5, 2017, **ISSN:** 16878132, **DOI:** 10.1177/1687814017702343, **Publisher:** SAGE Publications Inc.
12	Real-time replication of a stand-alone wind energy conversion system: Error analysis, C Vlad, AI Bratcu, I Munteanu, S Epure - International Journal of Electrical Power & Energy ..., 2014 Citat in 1. Loading system and control strategy for simulating wind turbine loads, X Yin, Y Lin, W Li, H Ye - Journal of Vibration and control, 2017 - journals.sagepub.com http://journals.sagepub.com/doi/abs/10.1177/1077546315600110 2. A review on wind turbine noise mechanism and de-noising techniques, WY Liu - Renewable Energy, 2017 – Elsevier, https://www.sciencedirect.com/science/article/pii/S0960148117301209 3. Design and Construction of a Wind Turbine Simulator for Integration to a Microgrid with Renewable Energy Sources, D Thakur, J Jiang - Electric Power Components and Systems, 2017 - Taylor & Francis http://www.tandfonline.com/doi/abs/10.1080/15325008.2017.1311385 4. Embedded Real-Time Simulation Platform for Power Distribution Systems, December 2017IEEE Access PP(99):1-1, DOI10.1109/ACCESS.2017.2784318, https://www.researchgate.net/publication/321842022_Embedded_Real-Time_Simulation_Platform_for_Power_Distribution_Systems
13	Indirect control of substrate concentration for a wastewater treatment process by dissolved oxygen tracking C Vlad, MI Sbarciog, M Barbu, AV Wouwer - Journal of Control Engineering and Applied Informatics, 2012 Citat in 1. Multi - input multi - output model - free predictive control and its application to wastewater treatment, H Li, S Yamamoto - IEEJ Transactions on Electrical and ..., 2017 - Wiley Online Library, http://onlinelibrary.wiley.com/doi/10.1002/tee.2017.12.issue-5/issuetoc
14	Using renewable energy sources for electric vehicles charging C Vlad, MA Bancila, T Munteanu, G Murariu - Electrical and Electronics Engineering (ISEEE), 2013 ..., 2013

	Citat in 1. Coordinated electric vehicle charging for commercial parking lot with renewable energy sources, K Jhala, B Natarajan, A Pahwa... - ... Power Components and ..., 2017 - Taylor & Francis http://www.tandfonline.com/doi/abs/10.1080/15325008.2016.1248253
15	Linear predictive control of a wastewater treatment process, C Vlad, M Sbarciog, M Barbu – 2011 Citat in 1. Networked Control with Time Delay Compensation Scheme Based on a Smith Predictor for the Activated Sludge Process, OK Ogidan - Journal of Control Engineering and Applied Informatics, 2017 - ceai.srait.ro http://www.ceai.srait.ro/index.php?journal=ceai&page=article&op=view&path%5B%5D=3795
16	Intelligent Control of a Distributed Energy Generation System Based on Renewable Sources, C Vlad, M Barbu, R Vilanova - Sustainability, 2016 Citat in 1. Chinese Electric Power Development Coordination Analysis on Resource, Production and Consumption: A Provincial Case Study, J Zhu, Z Zhao - Sustainability, 2017 - mdpi.com, http://www.mdpi.com/2071-1050/9/2/209/htm
17	1. Fast Estimation of the Damage Equivalent Load in Blade Geometry Multidisciplinar Optimization By: Echeverria Dura, Fernando; Mallor Gimenez, Fermin; Sanz Corretge, Javier JOURNAL OF SOLAR ENERGY ENGINEERING-TRANSACTIONS OF THE ASME Volume: 139 Issue: 4 Article Number: 041008 Published: AUG 2017
18	2. Design of dual-dimensional controller based on multi-objective gravitational search optimization algorithm for amelioration of impact of oscillation in power generated by large-scale wind farms (WS and scopus and scholar) , Hashemi, Y.; Shayeghi, H.; Moradzadeh, M. APPLIED SOFT COMPUTING Volume: 53 Pages: 236-261 Published: APR 2017
19	3. Numerical analysis of the spatial distribution of equivalent wind speeds in large-scale wind turbines , Shuting Wan, Lifeng Cheng, Xiaoling Sheng, 19 February 2017, Journal of Mechanical Science and Technology, February 2017, Volume 31, Issue 2, pp 965–974
20	**11 citari** în articol publicat în anul evaluat în revistă cotata ISI **Life Cycle Analysis in refurbishment of the buildings as intervention practices in energy saving-** • Recent developments, future challenges and new research directions in LCA of buildings: A critical review CK Anand, B Amor - Renewable and Sustainable Energy Reviews, 2017 – Elsevier • Life cycle assessment (LCA) of building refurbishment: A literature reviewA Vilches, A Garcia-Martinez, B Sanchez-Montañes - Energy and Buildings, 2017 – Elsevier • Evaluation of life cycle carbon impacts for higher education building redevelopment: a multiple case study approachD Hawkins, D Mumovic - Energy and Buildings, 2017 – Elsevier • Evaluation of life cycle carbon impacts for higher education building redevelopment: an archetype approachD Hawkins, D Mumovic - Energy and Buildings, 2017 – Elsevier • Realisation barriers in energy efficiency projects in Croatian public buildings: a critic overview and proposalsS Nižetić - International Journal of Sustainable Energy, 2017 - Taylor & Francis • Application of life cycle thinking towards sustainable cities: A reviewA Petit-Boix, P Llorach-Massana... - Journal of Cleaner ..., 2017 – Elsevier • Performance of an outdoor membrane photobioreactor for resource recovery from anaerobically treated sewageA Viruela, Á Robles, F Durán, MV Ruano... - Journal of Cleaner ..., 2017 – Elsevier • A review on current advances in the energy and environmental performance of buildings towards a more sustainable built environmentN Soares, J Bastos, LD Pereira, A Soares... - ... and Sustainable Energy ..., 2017 – Elsevier

	• Methodologies for Selection of Thermal Insulation Materials for Cost-Effective, Sustainable, and Energy-Efficient Retrofitting-A Kylili, PA Fokaides - Cost-Effective Energy Efficient Building Retrofitting, 2017 – Elsevier • Environmental assessment of deep energy refurbishment for energy efficiency-case study of an office building in New Zealand-A Ghose, SJ McLaren, D Dowdell, R Phipps - Building and Environment, 2017 – Elsevier Embodied carbon minimisation of retrofit solutions for walls By: Bras, Ana PROCEEDINGS OF THE INSTITUTION OF CIVIL ENGINEERS-ENGINEERING SUSTAINABILITY Volume: 170 Issue: 3 Pages: 141-156 Published: JUN 2017 ISSN: 1478-4629 Impact Factor 0,341
21	**2.** Design for micro-combined cooling, heating and power systems: Stirling engines and renewable power systems • **Open-source energy planning tool with easy-to-parameterize components for the conception of polygeneration systems S Gopisetty, P Treffinger, LM Reindl - Energy, 2017 - Elsevier**
22	1 Natural doubling of the apparent switching frequency using three-level ANPC converter Floricau, D.; Floricau, E.; Dumitrescu, M.; Nonsinusoidal Currents and Compensation, 2008. ISNCC 2008. International School on Issue Date: 10-13 June 2008 https://scholar.google.com/citations?user=4IPPXWcAAAAJ&hl=en A Seven-Switch Five-Level Active-Neutral-Point-Clamped Converter and Its Optimal Modulation Strategy Hongliang Wang ; Lei Kou ; Yan-Fei Liu ; Paresh C. Sen Published in: IEEE Transactions on Power Electronics (Volume: 32, Issue: 7, July 2017), Page(s): 5146 – 5161, Date of Publication: 28 September 2016 , ISSN Information: INSPEC Accession Number: 16707710, DOI: 10.1109/TPEL.2016.2614265, Publisher: IEEE https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&sciodt=0%2C5&cites=15022103813338540480&scipsc=&as_ylo=2015&as_yhi=2018 http://ieeexplore.ieee.org/abstract/document/7579192/
23	**2** Natural doubling of the apparent switching frequency using three-level ANPC converter Floricau, D.; Floricau, E.; Dumitrescu, M.; Nonsinusoidal Currents and Compensation, 2008. ISNCC 2008. International School on Issue Date: 10-13 June 2008 https://scholar.google.com/citations?user=4IPPXWcAAAAJ&hl=en Trade-off Study of Heat Sink and Output Filter Volume in a GaN HEMT Based Single Phase Inverter Emre Gurpinar ; Alberto Castellazzi Published in: IEEE Transactions on Power Electronics (Volume: PP, Issue: 99) ,Page(s): 1 – 1, Date of Publication: 20 July 2017 , DOI: 10.1109/TPEL.2017.2730038, Publisher: IEEE, Sponsored by: IEEE Power Electronics Society https://scholar.google.com/scholar?start=10&hl=en&as_sdt=0,5&sciodt=0,5&as_ylo=2015&as_yhi=2018&cites=15022103813338540480&scipsc= http://ieeexplore.ieee.org/abstract/document/7987046/
24	3 A new stacked NPC converter: 3L-topology and control Floricau, D. , Gateau, G. ; Dumitrescu, M. , Power Electronics and Applications, 2007 European Conference on, 2-5 Sept. 2007, Page(s): 1 - 10 , Print ISBN: 978-92-75815-10-8, Aalborg, IEEE Design and Implementation of a Sensorless Multilevel Inverter With Reduced Part Count N. Sandeep ; Udaykumar R. Yaragatti

	Published in: IEEE Transactions on Power Electronics (Volume: 32, Issue: 9, Sept. 2017) Page(s): 6677 – 6683 , Date of Publication: 13 March 2017, DOI: 10.1109/TPEL.2017.2681739 , Publisher: IEEE https://scholar.google.com/scholar?start=10&hl=en&as_sdt=0,5&sciodt=0,5&as_ylo=2015&as_yhi=2018&cites=15241680410421615463&scipsc= http://ieeexplore.ieee.org/abstract/document/7876783/
25	4 A new stacked NPC converter: 3L-topology and control Floricau, D. , Gateau, G. ; Dumitrescu, M. , Power Electronics and Applications, 2007 European Conference on, 2-5 Sept. 2007, Page(s): 1 - 10 , Print ISBN: 978-92-75815-10-8, Aalborg, IEEE Operation and Control of an Improved Hybrid Nine-Level Inverter N. Sandeep ; Udaykumar R. Yaragatti Published in: IEEE Transactions on Industry Applications (Volume: 53, Issue: 6, Nov.-Dec. 2017), Page(s): 5676 – 5686, Date of Publication: 09 August 2017 , INSPEC Accession Number: 17364065, DOI: 10.1109/TIA.2017.2737406, Publisher: IEEE https://scholar.google.com/scholar?start=0&hl=en&as_sdt=0,5&sciodt=0,5&as_ylo=2015&as_yhi=2018&cites=15241680410421615463&scipsc= http://ieeexplore.ieee.org/abstract/document/8003488/
26	5Electrical insulation study using partial discharge model Munteanu Toader, Dumitrescu Mariana, Published in: Electrotechnical Conference, 2000. MELECON 2000. 10th Mediterranean (Volume:3), Date of Conference: 29-31 May 2000 https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&sciodt=0%2C5&cites=10669186685849155238&scipsc=&as_ylo=2015&as_yhi=2018 Comparison between three-capacitance, analytical-based and finite element analysis partial discharge models in condition monitoring H.A. Illias ; G. Chen ; Paul L. Lewin Published in: IEEE Transactions on Dielectrics and Electrical Insulation (Volume: 24, Issue: 1, Feb. 2017), Page(s): 99 – 109, Date of Publication: 07 March 2017 Print ISSN: 1070-9878, INSPEC Accession Number: 16725173 DOI: 10.1109/TDEI.2016.005971, Publisher: IEEE https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&sciodt=0%2C5&cites=10669186685849155238&scipsc=&as_ylo=2015&as_yhi=2018 http://ieeexplore.ieee.org/abstract/document/7873465/
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28	1. 27-07-2017 | Original Paper | Issue 4/2017, Energy saving control strategy of servo drives with asynchronous motor, Journal:Electrical Engineering > Issue 4/2017 Authors:P. Butko, J. Vittek, T. Fedor, V. Vavrúš, Z. Mynar, Electrical Engineering December 2017, Volume 99, Issue 4, pp 1263–1274 https://link.springer.com/article/10.1007/s00202-017-0627-y https://www.springerprofessional.de/en/energy-saving-control-strategy-of-servo-drives-with-asynchronous/13334324 Ref to: ▯ 8.Munteanu T, Rosu E, Paduraru R, Dumitriu T, Gaiceanu M, Culea M, Dache C (2011) Real time implementation of suboptimal control position drive system with induction machine. In: Proceedings of the 2011-14th european conference power electronics and applications (EPE 2011). ISBN: 978-1-61284-167-0Google Scholar
29	2. 27-07-2017 | Original Paper | Issue 4/2017, Energy saving control strategy of servo drives with asynchronous motor, Journal:Electrical Engineering > Issue 4/2017 Authors:P. Butko, J. Vittek, T. Fedor, V. Vavrúš, Z. Mynar, Electrical Engineering December 2017, Volume 99, Issue 4, pp 1263–1274 https://link.springer.com/article/10.1007/s00202-017-0627-y https://www.springerprofessional.de/en/energy-saving-control-strategy-of-servo-drives-with-asynchronous/13334324 Ref to: 9. Munteanu T, Rosu E, Gaiceanu M, Paduraru R, Dumitriu T, Culea a M, Dache C (2009) The optimal control for position drive system with induction machine. In: 13th European conference power electronics and applications EPE '09. ISBN: 978-1-4244-4432-8Google Scholar
30	3. **Application of STATCOM-supercapacitor for low-voltage ride-through capability in DFIG-based wind farm, Neural Computing and Applications,** September 2017, Volume 28, Issue 9, pp 2665–2674 | MK Döşoğlu, AB Arsoy, U Güvenç - Neural Computing and Applications, 2017 - Springer Abstract Low-voltage problem emerges in cases of symmetrical and asymmetrical fault in power systems. This problem can be solved out by ensuring low-voltage ride-through capability of wind power plants, through a static synchronous compensator (STATCOM). The Citat de 4 ori Articole cu conținut similar Toate cele 2 versiuni [PDF] semanticscholar.org ref.to ***MATLAB/simulink-based grid power inverter for renewable energy sources integration, M.Gaiceanu***
31	Citare în articol publicat în anul evaluat în revistă cotata ISI [3]
32	**4. [PDF] Real Time Implementation of Dyadic Transform Algorithm for Automatic Condition Monitoring and Speed Control of IM** R Kabilan, G Selvakumar - ripublication.com Abstract In a closed loop system, we discover an accelerometer free-based speed control system utilizing ARM Cortex processor. Here, to detect the motor fault, a three-dimensional accelerometer is utilized as an input device. In generally, the output of accelerometer device Articole cu conținut similar Toate cele 2 versiuni International Journal of Electrical Engineering. ISSN 0974-2158 Volume 10, Number 1 (2017), pp. 121-136 © International Research Publication House http://www.irphouse.com ref.to ***Linearized model of the variable flux induction motor drive*** ***CR Dache, E Rosu, M Gaiceanu... - Electrical and Power ..., 2016 - ieeexplore.ieee.org*** C. R. Dache *et al.*, "Linearized Model of the Variable Flux Induction Motor Drive," *Electr. Power Eng. (EPE), 2016 Int. Conf. Expo.*, no. Epe, pp. 20–22, 2016.
33	**5. [PDF] Examining energy-efficient recuperative braking modes of traction asynchronous frequencycontrolled electric drives**

	O Sinchuk, I Kozakevich, D Kalmus... - Восточно ..., 2017 - irbis-nbuv.gov.ua Представлено результаты исследований проблемы энергооптимизации режимов рекуперативного торможения асинхронных частотно-регулируемых электроприводов транспортных средств. Доказано, что возможность реализации режима Sinchuk O.[1], Kozakevich I.[1], Kalmus D.[1], Siyanko R.[1] [1] Kryvyi Rih National University ***Ref. To Regenerative AC drive system with the three-phase induction machine***
34.	**6.Energy saving control strategy of servo drives with asynchronous motor** P Butko, J Vittek, T Fedor, V Vavrúš, Z Mynar - Electrical Engineering, 2017 - Springer Abstract Document describes reduction in energy consumption of servo drive with induction motor which depends on size and character of the load. Position control strategy is designed using optimal control theory and for minimization of energy expenditures considers the **Ref.to** Real time implementation of suboptimal control position drive system with induction machine

8.1.4 Lucrări ştiinţifice/tehnice in reviste indexate în baze de date internaţionale

Nr. crt.	Titlu lucrare	Nume, prenume autor(i) lucrare	Denumire volum conferinţă cotată ISI	Link-ul la site-ul conferinţei*
1	Machine Learning Techniques for Image Recognition Applications	G. Ciubucciu, R. Solea, A. Filipescu	The Annals of "Dunarea de Jos" University of Galati, Fascicle III, Vol. 40, No. 2, ISSN 2344-4738; Electrotechnics, Electronics, Automatic Control, Informatics DOAJ	https://doaj.org/toc/1221-454X
2	LOW-POWER AC LOADS AND ELECTRICAL POWER QUALITY	EPURE S., VLAD C., MUNTEANU T	JOURNAL OF SUSTAINABLE ENERGY VOL. 7 Index Copernicus	https://journals.indexcopernicus.com/search/journal/issue?issueId=all&journalJmlId=9317

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4	Prototype of an Electric Drive Elevator	M. Gaiceanu, / S. Epure/ C. R. Dache, / S. Ciuta	The Scientific Bulletin of Electrical Engineering Faculty 17 (1), 1-5 Degruyter	https://www.degruyter.com/view/j/sbeef.ahead-of-print/sbeef-2016-0024/sbeef-2016-0024.xml
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44.	**2. Three-phase phase-locked loop for grid voltage phase estimation under unbalanced and distorted conditions** F Sadeque, MS Reza... - Power and Energy ..., 2017 - ieeexplore.ieee.org This paper proposes a signal reforming algorithm based three-phase phase-locked loop (PLL) to estimate the phase angles of an unbalanced and harmonics affected three-phase voltage system. This technique transforms the unbalanced waveforms into a balanced one Ref.to **Regenerative AC drive system with the three-phase induction machine**
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	Applications NA Yehia, S Rezeka, M El-Habrouk - International Journal of Advanced ... - researchgate.net ABSTRACT This paper present a concise review of the control techniques of DC motors with the various control methods and optimisation techniques used in the literature. The paper presents a block diagram relating these control techniques. The paper then presents the Ref to ***Field weakening optimal control of DC motor drive systems***
47.	**5. Flux-weakening control strategy of separately excited DC machine utilizing voltage regulation for modifying field current** N Pothi - Control and Robotics Engineering (ICCRE), 2017 2nd ..., 2017 - ieeexplore.ieee.org This paper proposes a new approach flux-weakening control strategy of the separately excited DC machine. The proposed method is based on the closed-loop speed control in which the field current is independently controlled to adjust the flux-linkage in the flux- Ref.to ***Field weakening optimal control of DC motor drive systems***
48.	**6. Optimal Control of Induction Machines to Minimize Transient Energy Losses** SJ Plathottam - 2017 - search.proquest.com, For the degree of Doctor of Philosophy Abstract Induction machines are electromechanical energy conversion devices comprised of a stator and a rotor. Torque is generated due to the interaction between the rotating magnetic field from the stator, and the current induced in the rotor conductors. Their speed Citat de 1 ori Articole cu conținut similar Toate cele 2 versiuni Ref to ***Vector-controlled optimal drive system for the induction motor*** [42] M. Gaiceanu, E. Rosu, T. Munteanu, T. Dumitriu, R. Paduraru, and C. Dache, "Optimal control for AC drive with quadratic criteria." pp. 1–10, 2009. [43] E. Rosu, T. Munteanu, M. Gaiceanu, T. Dumitriu, R. Paduraru, and C. Dache, "Optimal control using energetic criteria for electric drive systems: Plenary talk," in *2010 3rd International Symposium on Electrical and Electronics Engineering (ISEEE)*, 2010, pp. IV–XV. [44] M. Gaiceanu, E. Rosu, R. Paduraru, and T. Munteanu, "Vector-controlled optimal drive system for the induction motor," in *2013 4th International Symposium on Electrical and Electronics Engineering (ISEEE)*, 2013, pp. 1–6.
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	H Salih, H Abdelwahab... - ... , Control, Computing and ..., 2017 - ieeexplore.ieee.org In the world of Automation Industrial, Programmable Logic Controllers (PLCs) are the dominant types of automatic controllers, and so engineers are racing to develop the best software to give it the ultimate abilities to maximize the outcome. Basically, for understanding **14. PLC based automated liquid mixing and bottle filling system** M Sreejeth, S Chouhan - Power Electronics, Intelligent Control ..., 2016 - ieeexplore.ieee.org Automating repetitive tasks in the industries increases the productivity; reduces the probability of error and maintain product quality. Traditional methods of mixing fixed quantities of different types of liquids and filling them in bottles involve manual mixing of the Ref. To ***Mathematical modelling of color mixing process and PLC control implementation by using human.***
56.	15. **Optimal Control of Induction Machines to Minimize Transient Energy Losses** SJ Plathottam - 2017 - search.proquest.com Abstract Induction machines are electromechanical energy conversion devices comprised of a stator and a rotor. Torque is generated due to the interaction between the rotating magnetic field from the stator, and the current induced in the rotor conductors. Their speed **16. Transient Energy Efficiency Analysis of Field Oriented Induction Machines** SJ Plathottam, H Salehfar - IEEE Access, 2017 - ieeexplore.ieee.org An open loop control law for stator $ d $-and $ q $-axis currents in a rotor field oriented induction machine are derived in the form of analytical functions of time and used to study how energy losses during speed transients can be minimized. The trajectories due to the Ref.to ***Optimal control using energetic criteria for electric drive systems: Plenary talk***
57.	**17. „Flux-weakening control strategy of separately excited DC machine utilizing voltage regulation for modifying field current** N Pothi - Control and Robotics Engineering (ICCRE), 2017 2nd ..., 2017 - ieeexplore.ieee.org This paper proposes a new approach flux-weakening control strategy of the separately excited DC machine. The proposed method is based on the closed-loop speed control in which the field current is independently controlled to adjust the flux-linkage in the flux-Ref.to ***Linear control of DC motor drive with field weakening***
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61.	**21. Implementation of Real-Time Remote Communication between Matlab/Simulink and Plc via Visualization Interface Developed With B&R Automation Studio** **Rupali V Salunke 1, Pratap S Vikhe 2, Trupti Sarode** **http://www.rroij.com/open-access/implementation-of-realtime-remote-communicationbetween-matlabsimulink-and-plc-via-visualizationinterface-developed-with-br-automation-studio.php?aid=42083** ref.to .Schiop, L., Gaiceanu, Mathematical Modelling Of Color Mixing Process And PLC Control Implementation By Using Human Machine Interface,Electrical& Electronics Engineering (ISEEE),3rd International Symposium on , vol., no., pp.165-170,16-18.
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8.1.9 Produse/servicii/tehnologii rezultate din activităţi de cercetare, bazate pe brevete, omologări sau inovaţii proprii.

8.1.10 Studii prospective şi tehnologice, normative, proceduri, metodologii şi planuri tehnice, noi sau perfecţionate, comandate sau utilizate de beneficiar.

Director Centru SICECAPC,

Prof.univ.dr. habil.ing. Marian Găiceanu