

## Lista completă de lucrări științifice

### A. Cele mai relevante 10 lucrări pentru realizările profesionale proprii

1. Ghiormez, L., Panoiu, M., Panoiu, C., Muscalagiu, I. Proportional regulator-based approach for a three-phase electric arc furnace, INTERNATIONAL CONFERENCE ON APPLIED SCIENCES (ICAS2018), May 9-11, 2018, Banja Luka, BOSNIA AND HERZEGOVINA, Book Series: IOP Conference Series-Materials Science and Engineering, Volume: 477, No. 1, Article Number: 012016, ISSN: 1757-8981, Published 2019; DOI: 10.1088/1757-899X/477/1/012016 WOS:000461184100016
2. Ghiormez, L., Panoiu, M., Panoiu, C., Pop, C., Power Control of an Electric Arc Furnace Using Intelligent Techniques, 2018 IEEE INTERNATIONAL CONFERENCE ON INDUSTRIAL TECHNOLOGY (ICIT) FEB. 20-22, 2018, Lyon, France, ISBN: 978-1-5090-5949-2, Book Series: IEEE International Conference on Industrial Technology, Pages: 292-297, Published: 2018; DOI: 10.1109/ICIT.2018.8352192 WOS:000494652000046
3. Ghiormez, L., Prostean, O., Filip, I., Panoiu, M. Fuzzy Logic Control Strategy for a Three-Phase Electric Arc Furnace, SOFT COMPUTING APPLICATIONS, SOFA 2016, VOL 2 Book Series: Advances in Intelligent Systems and Computing, Volume: 634, Pages: 253-264, ISBN:978-3-319-62524-9, Published: 2018; DOI: 10.1007/978-3-319-62524-9\_20 WOS:000433139800020
4. Ghiormez L, Panoiu M, Panoiu C, Tirian O, Time series prediction in the case of nonlinear loads by using ADALINE and NAR neural networks, IN IOP CONFERENCE SERIES: MATERIALS SCIENCE AND ENGINEERING (ICAS) 2018 Jan, Banja Luka, BOSNIA AND HERZEGOVINA, Vol. 294, No. 1, p. 012026, IOP Publishing, Published: 2018.
5. Ghiormez, L., Panoiu, M., Panoiu, C., Pop, C., Electric Current Prediction for the Nonlinear High Power Loads using Narx Neural Networks, 2017 IEEE INTERNATIONAL SYMPOSIUM ON SIGNAL PROCESSING AND INFORMATION TECHNOLOGY (ISSPIT), Book Series: IEEE International Symposium on Signal Processing and Information Technology, Pages: 128-133, 17th IEEE International Symposium on Signal Processing and Information Technology (ISSPIT), DEC 18-20, 2017, Bilbao, SPAIN, ISSN: 2162-7843, ISBN: 978-1-5386-4662-5, Published: 2017; DOI: 10.1109/ISSPIT.2017.8388629 WOS: 000437165400024
6. Ghiormez, L., Prostean, O., Panoiu, M., and Panoiu, C., GUI for Studying the Parameters Influence of the Electric Arc Model for a Three-Phase Electric Arc Furnace, INTERNATIONAL CONFERENCE ON APPLIED SCIENCES (ICAS2016), Book Series: IOP Conference Series-Materials Science and Engineering, Volume: 163, Article Number: UNSP 012027, International Conference on Applied Sciences (ICAS), MAY 25-27, 2016, Hunedoara, ROMANIA, ISSN: 1757-8981, Published: 2017; WOS:000399755300026
7. Ghiormez, L., Panoiu, M., Panoiu, C., Rob, R., Electric Arc Model in PSCAD – EMTDC as embedded component and the dependency of the desired Active Power, 14TH INTERNATIONAL CONFERENCE ON INDUSTRIAL INFORMATICS, INDIN 2016, Iulie 2016, Poitiers, FRANTA, Pages: 351-356, ISSN: 1935-4576, Published: 2016; WOS:000393551200050
8. Ghiormez, L., Prostean, O., Panoiu, M., and Panoiu, C., Fuzzy Logic and PD Control Strategies of a Three-Phase Electric Arc Furnace, IN INTERNATIONAL CONFERENCE ON COMPUTATIONAL COLLECTIVE INTELLIGENCE (ICCCI), Septembrie 2016, Halkidiki, GRECIA, Pages: 509-519, Springer International Publishing, 2016, Vol: 9875, ISSN: 0302-9743, Published: 2016; WOS:000387734300047
9. Ghiormez, L., and Prostean, O., Electric Arc Current Control for an Electric Arc Furnace Based on Fuzzy Logic, 10TH IEEE INTERNATIONAL SYMPOSIUM ON APPLIED COMPUTATIONAL INTELLIGENCE AND INFORMATICS (SACI), Mai 2015, Timișoara, ROMANIA, Pages: 359 – 364, ISBN:978-1-4799-9911-8, Published: 2015, WOS:000380397800066
10. Pănoiu, M., Pănoiu, C., Ghiormez, L., Modeling of the Electric Arc Behaviour of the Electric Arc Furnace, PROCEEDINGS OF THE 5TH INTERNATIONAL WORKSHOP SOFT COMPUTING APPLICATIONS (SOFA), 22-24 August 2012, Szeged, UNGARIA, Pages: 261-271, ISSN 2194-5357 ISBN 978-3-642-33940-0, WOS:000314077300024

### B. Teza de doctorat

1. Ghiorghioni L., Modelarea, identificarea și conducerea sistemelor cu arc electric. Aplicații privind cuptorul cu arc electric, conducător științific Prof.univ.dr.ing. O.Proștean, 224 pg., 2017, Seria 12: Ingineria Sistemelor, Nr.19, ISBN: 978-606-35-0174-6, ISSN: 2068-7990.

### C. Brevete de invenție și alte titluri de proprietate industrială

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### D. Cărți și capitole în cărți

1. Ghiormez L., Pănoiu M., Modelarea, identificarea și conducerea proceselor utilizate în electrotermie, Ed. POLITEHNICA, Timișoara, 216 pg., 2018, ISBN: 978-606-35-0209-5.

### E. Articole/studii în extenso, publicate în reviste din fluxul științific internațional principal

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### F. Publicații în extenso, apărute în lucrări ale principalelor conferințe internaționale de specialitate

1. Ghiormez, L., Panoiu, M., Panoiu, C., & Muscalagiu, I. Tuning proportional-derivative controller for a three-phase electric arc furnace. In Journal of Physics: Conference Series (Vol. 1781, No. 1, p. 012039), (2021, February), DOI:10.1088/1742-6596/1781/1/011001, IOP Publishing.
2. Ghiormez, L., Panoiu, M., Panoiu, C., Muscalagiu, I. Proportional regulator-based approach for a three-phase electric arc furnace, INTERNATIONAL CONFERENCE ON APPLIED SCIENCES (ICAS2018), May 9-11, 2018, Banja Luka, BOSNIA AND HERZEGOVINA, Book Series: IOP Conference Series-Materials Science and Engineering, Volume: 477, No. 1, Article Number: 012016, ISSN: 1757-8981, Published 2019; DOI: 10.1088/1757-899X/477/1/012016 WOS:000461184100016
3. Ghiormez, L., Panoiu, M., Panoiu, C., Pop, C., Power Control of an Electric Arc Furnace Using Intelligent Techniques, 2018 IEEE INTERNATIONAL CONFERENCE ON INDUSTRIAL TECHNOLOGY (ICIT) FEB. 20-22, 2018, Lyon, France, ISBN: 978-1-5090-5949-2, Book Series: IEEE International Conference on Industrial Technology, Pages: 292-297, Published: 2018; DOI: 10.1109/ICIT.2018.8352192 WOS:000494652000046
4. Panoiu, M., Panoiu, C., Ghiormez, L., Neuro-fuzzy modeling and prediction of current total harmonic distortion for high power nonlinear loads, IEEE (SMC) INTERNATIONAL CONFERENCE ON INNOVATIONS IN INTELLIGENT SYSTEMS AND APPLICATIONS, INISTA 2018, Pages: 1-7, 14 September 2018, ISBN: 978-1-5386-5150-6, Published: 2018; DOI: 10.1109/INISTA.2018.8466290 WOS:000455620700026
5. Ghiormez, L., Prostean, O., Filip, I., Panoiu, M. Fuzzy Logic Control Strategy for a Three-Phase Electric Arc Furnace, SOFT COMPUTING APPLICATIONS, SOFA 2016, VOL 2 Book Series: Advances in Intelligent Systems and Computing, Volume: 634, Pages: 253-264, ISBN:978-3-319-62524-9, Published: 2018; DOI: 10.1007/978-3-319-62524-9\_20 WOS:000433139800020
6. Ghiormez, L., Prostean, O., Panoiu, M., & Panoiu, C., Fuzzy Logic and PD Control Strategies of a Three-Phase Electric Arc Furnace, IN TRANSACTIONS ON COMPUTATIONAL COLLECTIVE INTELLIGENCE XXIX, 2018, Pages: 1-20, Springer, Cham, Published: 2018 ISBN: 978-3-319-90286-9
7. Ghiormez L, Panoiu M, Panoiu C, Tirian O, Time series prediction in the case of nonlinear loads by using ADALINE and NAR neural networks, IN IOP CONFERENCE SERIES: MATERIALS SCIENCE AND ENGINEERING (ICAS) 2018 Jan, Banja Luka, BOSNIA AND HERZEGOVINA, Vol. 294, No. 1, p. 012026, IOP Publishing, Published: 2018.
8. Ghiormez, L., Panoiu, M., Panoiu, C., Pop, C., Electric Current Prediction for the Nonlinear High Power Loads using Narx Neural Networks, 2017 IEEE INTERNATIONAL SYMPOSIUM ON SIGNAL PROCESSING AND INFORMATION TECHNOLOGY (ISSPIT), Book Series: IEEE International Symposium on Signal Processing and Information Technology, Pages: 128-133, 17th IEEE International Symposium on Signal Processing and Information Technology (ISSPIT), DEC 18-20, 2017, Bilbao, SPAIN, ISSN: 2162-7843, ISBN: 978-1-5386-4662-5, Published: 2017; DOI: 10.1109/ISSPIT.2017.8388629 WOS: 000437165400024
9. Baci, I., Ghiormez, L., Vasar, C., Study for the electric arc of alternative current at the single phase welding machine using the Matlab/Simulink environment, INTERNATIONAL CONFERENCE ON APPLIED SCIENCES (ICAS2016), Book Series: IOP Conference Series-Materials Science and Engineering, Volume: 163, Article Number: UNSP 012027, International Conference on Applied

10. Ghiormez, L., Prostean, O., Panoiu, M., and Panoiu, C., GUI for Studying the Parameters Influence of the Electric Arc Model for a Three-Phase Electric Arc Furnace, INTERNATIONAL CONFERENCE ON APPLIED SCIENCES (ICAS2016), Book Series: IOP Conference Series- Materials Science and Engineering, Volume: 163, Article Number: UNSP 012027, International Conference on Applied Sciences (ICAS), MAY 25-27, 2016, Hunedoara, ROMANIA, ISSN: 1757-8981, Published: 2017; WOS:000399755300026
11. Ghiormez, L., Panoiu, M., Panoiu, C., Rob, R., Electric Arc Model in PSCAD – EMTDC as embedded component and the dependency of the desired Active Power, 14TH INTERNATIONAL CONFERENCE ON INDUSTRIAL INFORMATICS, INDIN 2016, Iulie 2016, Poitiers, FRANTA, Pages: 351-356, ISSN: 1935-4576, Published: 2016; WOS:000393551200050
12. Ghiormez, L., Prostean, O., Panoiu, M., and Panoiu, C., Fuzzy Logic and PD Control Strategies of a Three-Phase Electric Arc Furnace, IN INTERNATIONAL CONFERENCE ON COMPUTATIONAL COLLECTIVE INTELLIGENCE (ICCCI), Septembrie 2016, Halkidiki, GRECIA, Pages: 509-519, Springer International Publishing, 2016, Vol: 9875, ISSN: 0302-9743, Published: 2016; WOS:000387734300047
13. Panoiu, M., Ghiormez, L., and Panoiu, C., Adaptive neuro-fuzzy system for current prediction in electric arc furnace, IN INTERNATIONAL WORKSHOP SOFT COMPUTING APPLICATIONS (SOFA), 2014, July, Timișoara, ROMANIA, Pages: 423-437, Springer, Cham, Vol 356, ISBN: 978-3-319-18296-4, Published: 2016; WOS: 000452853200035
14. Ghiormez, L., and Prostean, O., Electric Arc Current Control for an Electric Arc Furnace Based on Fuzzy Logic, 10TH IEEE INTERNATIONAL SYMPOSIUM ON APPLIED COMPUTATIONAL INTELLIGENCE AND INFORMATICS (SACI), Mai 2015, Timișoara, ROMANIA, Pages: 359 – 364, ISBN:978-1-4799-9911-8, Published: 2015, WOS:000380397800066
15. Ghiormez L, Panoiu M, Current control of a 3-phase electric arc furnace using fuzzy logic, ANNALS OF THE FACULTY OF ENGINEERING HUNEDOARA, 2015, Nov 1;13(4), Pages: 237-242, Published: 2015
16. Panoiu, M., Panoiu, C., Iordan, A., and Ghiormez, L., Artificial neural networks in predicting current in electric arc furnaces, IN IOP CONFERENCE SERIES: MATERIALS SCIENCE AND ENGINEERING (ICAS), Mil Econ Acad, Martie 2013, Wuhan, CHINA, Vol. 57, no. 1, Pages: 1-7, ISSN: 1757-8981, IOP Publishing, Published: 2014, WOS:000335980400011
17. Ghiormez, L., and Prostean, O., Parameters Influence in Electric Arc Modeling, 8TH IEEE INTERNATIONAL SYMPOSIUM ON APPLIED COMPUTATIONAL INTELLIGENCE AND INFORMATICS (SACI), Timisoara, ROMANIA, 2013, Pages: 209 – 213, ISBN:978-1-4673-6400-3; 978-1-4673-6397-6, Published: 2013, WOS:000333188100038
18. Ghiormez, L., Prostean, O., Panoiu, M., and Panoiu, C., Numerical modeling of some nonlinear processes in electric arc furnace operation, IN 11TH INTERNATIONAL CONFERENCE OF NUMERICAL ANALYSIS AND APPLIED MATHEMATICS 2013 (ICNAAM 2013), Octombrie 2013, Rhodes, GRECIA, Vol. 1558, no. 1, Pages: 1325-1328, AIP Publishing, Published: 2013 WOS:000331472800313
19. Panoiu, M., Ghiormez, L., Panoiu, C., and Iordan, A., A numerical modeling of nonlinear load behavior using artificial neural networks, IN 11TH INTERNATIONAL CONFERENCE OF NUMERICAL ANALYSIS AND APPLIED MATHEMATICS 2013 (ICNAAM 2013), Octombrie 2013, Rhodes, GRECIA, Vol. 1558, no. 1, Pages: 1337-1340, AIP Publishing, Published: 2013, WOS:000331472800316
20. Ghiormez L, Panoiu M, Panoiu C, Harmonics Analysis of the 3 Phase Electric Arc Furnace using Models of the Electric Arc, 3RD WORLD CONFERENCE ON INFORMATION TECHNOLOGY (WCIT 2012), 14-16 Noiembrie 2012, Barcelona, SPANIA, Pages: 424-430, Vol. 3, Published: 2013

21. Ghiormez L, Prostean O, Panoiu M and Panoiu C, Validation of an Electric Arc Model in the Two Technological Phases of an Electric Arc Furnace Process, IN ELECTRIC POWER AND ENERGY SYSTEMS PARAMETERS, 13TH INTERNATIONAL CONFERENCE ON ELECTRIC POWER SYSTEMS, HIGH VOLTAGES, ELECTRIC MACHINES, Creta, GRECIA, 2013, 500, 5000, Pages: 138 – 142, Published: 2013, ISBN: 978-960-474-328-5
22. Pănoiu, M., Pănoiu, C., Ghiormez, L., Modeling of the Electric Arc Behaviour of the Electric Arc Furnace, PROCEEDINGS OF THE 5TH INTERNATIONAL WORKSHOP SOFT COMPUTING APPLICATIONS (SOFA), 22-24 August 2012, Szeged, UNGARIA, Pages: 261-271, ISSN 2194-5357 ISBN 978-3-642-33940-0, WOS:000314077300024
23. Pănoiu, M., Iordan, A., Pănoiu, C., Ghiormez, L., Interactive Environment for Learning the Rules for Physical Storing of the Information in the Computers Memory, PROCEEDINGS OF THE 8TH WSEAS INTERNATIONAL CONFERENCE ON EDUCATION AND EDUCATIONAL TECHNOLOGY (EDU09), 17-19 Octombrie 2009, Genova, ITALIA, , pag. 239-244, WOS:000276695900039.
24. Pănoiu M, Pănoiu C, Ghiormez L, Rob R, Maintaining Optimal Condition in an Incubator Using Intelligent Fuzzy Algorithm, 2ND WORLD CONFERENCE ON INNOVATION AND COMPUTER SCIENCE, 9-14 Mai 2012, Izmir, TURCIA, Pages 152-156, Vol. 2.
25. Pănoiu M, Pănoiu C, Rob R, Ghiormez L, System Based on Fuzzy Logic for maintain optimum environmental conditions in a fir saplings tree greenhouse, PROCEEDINGS OF THE 14TH WSEAS INTERNATIONAL CONFERENCE ON SYSTEM, 22-24 Iulie, Corfu, GRECIA, 2010, Pages: 464-469, ISSN: 1792-4235, ISBN: 978-960-474-214-1
26. Pănoiu M, Pănoiu C, Ghiormez L, Rob R, Intelligent System Based on DSP to Monitoring and Maintain Optimum Environmental Conditions in a Fir Saplings Tree Greenhouse, WSEAS TRANSACTION ON SYSTEMS AND CONTROL, Vol.5, Octombrie 2010, Pages: 835-846.
27. Pănoiu M, Iordan A, Pănoiu C, Ghiormez L, Educational Software for Teaching the Basics of Computer Science, WSEAS TRANSACTIONS ON ADVANCES IN ENGINEERING EDUCATION, Decembrie 2009, Pages: 478-487.

#### **G. Alte lucrări și contribuții științifice sau, după caz, din domeniul creației artistice**

##### **- Reviste**

1. Ghiormez L și Prostean O, Modelarea și conducerea cu regulator fuzzy a cuptoarelor cu arc electric trifazate, CONTROL & INSTRUMENTATION ASSOCIATION OF ROMANIA, Vol. 1, Pages. 8-10, Publicat 2018

##### **- Conferințe**

1. Ghiormez L și Prostean O, Validation of a Model Used to Analyse the Electric Arc Behavior, EDUCATION, RESEARCH, INNOVATION (ERIN 2013), Bratislava, SLOVACIA, 2013.
2. Cunțan C, Baci I, Ghiormez L, DC Stabilizer with Digital Control, 10TH ANNIVERSARY INTERNATIONAL CONFERENCE ON ACCOMPLISHMENTS IN ELECTRICAL AND MECHANICAL ENGINEERING AND INFORMATION TECHNOLOGY (DEMI 2011), Banja Luka, BOSNIA AND HERZEGOVINA, Pages. 807-812.

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