

Lista de lucrări

Numele și prenumele: **LEON Florin**

A. Teza de doctorat

- *Noi clase de agenți inteligenți cu capacități cognitive* (2005), conducător științific: prof. dr. ing. Dan Gâlea

B. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate în străinătate.

C. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate în țară, la edituri recunoscute CNCSIS (sau CNCS).

1. Florin Leon (2020). Sinteze de inteligența artificială, Tehnopress, Iasi, 205 pag.
2. Florin Leon (2020). Aplicații de inteligența artificială în C#, Tehnopress, Iasi, 240 pag.
3. Florin Leon (2014). Inteligența artificială: mașini cu vectori suport, Tehnopress, Iasi, 184 pag.
4. Florin Leon (2012). Inteligența artificială: raționament probabilistic, tehnici de clasificare, Tehnopress, Iasi, 193 pag.
5. Florin Leon (2012). Aplicații de ingineria programării în C#, Tehnopress, Iasi, 264 pag.
6. Florin Leon (2008). Explorarea datelor web. Aplicații, Tehnopress, Iasi, 149 pag.
7. Gabriela Maria Atanasiu, Florin Leon (2007). Structural Dynamics Applications Using Matlab, Tehnopress, Iasi, 242 pag.
8. Florin Leon (2006). Agenți inteligenți cu capacități cognitive, Tehnopress, Iasi, 271 pag.
9. Cristian Aflori, Mitica Craus, Ioan Sova, Florin Leon, Cristian Butincu, Cristian-Mihai Amarandei (2005). GRID - Tehnologii și aplicații, Politehniul, Iasi, 198 pag.
10. Mitica Craus, Cristian Butincu, Cristian Aflori, Ioan Sova, Florin Leon, Augustin-Ionut Gavrilă (2005). Regăsirea informațiilor pe web, Politehniul, Iasi, 200 pag.
11. Florin Leon, Mihai Horia Zaharia (2005). Ingineria programării, Politehniul, Iasi, 192 pag.
12. Mihai Horia Zaharia, Florin Leon (2004). Limbajul C de la zero la student, Politehniul, Iasi, 321 pag.

D. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate pe plan local.

E. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate pe web.

F. Lucrări științifice publicate în reviste cotate ISI sau indexate în baze de date Internaționale.

F1 - lucrări ISI

1. Florin Leon, Petru Cascaval (2025). Optimization Method for Reliability-Redundancy Allocation Problem in Large Hybrid Binary Systems. *Mathematics*, vol. 13, no. 15, article number 2450, 25 pag., ISSN 2227-7390, DOI 10.3390/math13152450, IF 2.2, Q1
2. Robert Chihaiia, Florin Leon, Maria Trocan (2025). From Text to Idea Embeddings: A Review on Quintessential Information Extraction. *Journal of Information and Telecommunication*, 30 pag., ISSN 2475-1839, DOI 10.1080/24751839.2025.2587991, IF 1.7, Q3
3. Marius Gavrilescu, Florin Leon, Alina-Adriana Minea (2025). Techniques for Transversal Skill Classification and Relevant Keyword Extraction from Job Advertisements. *Information*, vol. 16, no. 3, article number 167, 24 pag., ISSN 2078-2489, DOI 10.3390/info16030167, IF 2.9, Q2
4. Georgiana Bunea, Florin Leon, Ionut-Ovidiu Toma (2025). Machine Learning Approach in the Quantitative Evaluation of the Seismic Behaviour for 3D Reinforced Concrete Frame Structures. *Structures*, vol. 80, article number 109750, Elsevier, 2025, 21 pag., ISSN 2352-0124, DOI 10.1016/j.istruc.2025.109750, IF 4.3, Q1
5. Florin Leon, Marius Gavrilescu, Sabina-Adriana Floria, Alina-Adriana Minea (2024). Hierarchical Classification of Transversal Skills in Job Advertisements Based on Sentence Embeddings. *Information*, vol. 15, no. 3, article number 151, 18 pag., ISSN 2078-2489, DOI 10.3390/info15030151, IF 2.4, Q2
6. Christoph Popp, Andreas Serov, Felix Glatzki, Christoph Ziegler, Andreea-Iulia Oлару, Jaime Maldonado, Joachim Clemens, Jurgen Adamy, Maxim Arbitmann, Florin Leon, Steven Peters, Kerstin Schill, Sighard Schrabler, Hermann Winner (2024). PRORETA 5 - Building Blocks for Automated Urban Driving Enhancing City Road Safety. *at-Automatisierungstechnik*, vol. 72, no. 4, pp. 293-307, ISSN 2196-677X, DOI 10.1515/auto-2023-0092, IF 1.0, Q4
7. Alexandru Grigoras, Florin Leon (2024). Synthetic Time Series Generation for Decision Intelligence. *Mathematics*, vol. 12, no. 16, article number 2494, 17 pag., ISSN 2227-7390, DOI 10.3390/math12162494, IF 2.592, Q1
8. Filip Tarcoveanu, Florin Leon, Catalin Lisa, Silvia Curteanu, Andreea Feraru, Kashif Ali, Nicoleta Anton (2024). The Use of Artificial Neural Networks in Studying the Progression of Glaucoma. *Scientific Reports*, vol. 14, article number 19597, Nature Portfolio, <https://www.nature.com/articles/s41598-024-70748-1>, 15 pag., ISSN 2045-2322, DOI 10.1038/s41598-024-70748-1, IF 3.8, Q1
9. Iuliana Birgauanu, Marius Gavrilescu, Florin Leon, Silvia Curteanu, Gabriela Lisa (2024). Thermodynamic Properties of Binary, Ternary and Quaternary Mixtures: N-Butyl Acetate- n-Hexanol - n,n-Dimethylacetamide-Water. Modeling Using Regression Algorithms and Optimization Using Socially-Inspired Evolutionary Algorithms. *Journal of the Taiwan Institute of Chemical Engineers*, vol. 165, article number 105796, 8 pag., ISSN 1876-1070, DOI 10.1016/j.jtice.2024.105796, IF 5.5, Q1
10. Andreea-Iulia Patachi, Florin Leon (2023). Multiagent Multimodal Trajectory Prediction in Urban Traffic Scenarios Using a Neural Network-Based Solution. *Mathematics*, vol.

- 11, no. 8, article number 1923, 25 pag., ISSN 2227-7390, DOI 10.3390/math11081923, IF 2.4, Q1
11. Codrut-Georgian Artene, Ciprian Oprisa, Cristian Nicolae Butincu, Florin Leon (2023). Finding Patient Zero and Tracking Narrative Changes in the Context of Online Disinformation Using Semantic Similarity Analysis. *Mathematics*, vol. 11, no. 9, article number 2053, 26 pag., ISSN 2227-7390, DOI 10.3390/math11092053, IF 2.4, Q1
 12. Zofia Wrona, Wojciech Buchwald, Maria Ganzha, Marcin Paprzycki, Florin Leon, Noman Noor, Constantin-Valentin Pal (2023). Overview of Software Agent Platforms Available in 2023. *Information*, vol. 14, no. 6, article number 348, 47 pag., ISSN 2078-2489, DOI 10.3390/info14060348, IF 3.1, Q2
 13. Alexandru Grigoras, Florin Leon (2023). Transformer-Based Model for Predicting Customers' Next Purchase Day in e-Commerce. *Computation*, vol. 11, no. 11, article number 210, 12 pag., ISSN 2079-3197, DOI 10.3390/computation11110210, IF 2.2, Q2
 14. Gabriela Lisa, Iuliana Birgauanu, Catalin Lisa, Florin Leon, Silvia Curteanu (2023). Modeling of Excess Molar Volume for Binary and Ternary Mixtures of Benzyl Alcohol, n-Hexanol and Water. *Environmental Engineering and Management Journal*, vol. 22, no. 12, pp. 2157-2164, ISSN 1582-9596, DOI 10.30638/eemj.2023.185, IF 1.1, Q4
 15. Florin Leon (2022). ActressMAS, a .NET Multi-Agent Framework Inspired by the Actor Model. *Mathematics*, vol. 10, no. 3, article number 382, 33 pag., ISSN 2227-7390, DOI 10.3390/math10030382, IF 2.592, Q1
 16. Julia Garbaruk, Doina Logofatu, Costin Badica, Florin Leon (2022). Digital Image Evolution of Artwork Without Human Evaluation Using the Example of the Evolving Mona Lisa Problem. *Vietnam Journal of Computer Science*, vol. 9, no. 2, pp. 203-215, ISSN 2196-8888, eISSN 2196-8896, DOI 10.1142/s2196888822500075, IF 0.9, Q4
 17. Dumitru-Daniel Vecliuc, Florin Leon, Costin Badica (2022). The Effect of Collaborative Behaviors in Emergency Evacuation. *Simulation Modelling Practice and Theory*, vol. 118, July 2022, article number 102554, 21 pag., ISSN 1569-190X, DOI 10.1016/j.simpat.2022.102554, IF 4.2, Q1
 18. Costel Anton, Florin Leon, Marius Gavrilesco, Elena-Niculina Dragoi, Sabina-Adriana Floria, Silvia Curteanu, Catalin Lisa (2022). Obtaining Bricks Using Silicon-Based Materials: Experiments, Modeling and Optimization with Artificial Intelligence Tools. *Mathematics*, vol. 10, no. 11, article number 1891, 21 pag., ISSN 2227-7390, DOI 10.3390/math10111891, IF 2.592, Q1
 19. Codrut-Georgian Artene, Dumitru-Daniel Vecliuc, Marius Nicolae Tibeica, Florin Leon (2022). An Experimental Study of Convolutional Neural Networks for Functional and Subject Classification of Web Pages. *Vietnam Journal of Computer Science*, vol. 9, no. 4, pp. 435-453, ISSN 2196-8888, eISSN 2196-8896, DOI 10.1142/s2196888822500245, IF 0.9, Q4
 20. Victor Ianole, Mihai Danciu, Constantin Volovat, Cipriana Stefanescu, Paul-Corneliu Herghelegiu, Florin Leon, Adrian Iftene, Ciprian-Gabriel Cusmuluiuc, Bogdan Toma, Vasile Drug, Delia-Gabriela Ciobanu-Apostol (2022). Is High Expression of Claudin-7 in Advanced Colorectal Carcinoma Associated with a Poor Survival Rate? A Comparative Statistical and Artificial Intelligence Study. *Cancers*, vol. 14, no. 12, article number 2915, 16 pag., ISSN 2072-6694, DOI 10.3390/cancers14122915, IF 5.2, Q2
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- Mixtures of Benzyl Alcohol-N-Hexanol-Water. *Materials*, vol. 15, no. 16, article number 5699, 16 pag., ISSN 1996-1944, DOI 10.3390/ma15165699, IF 3.4, Q2
22. Filip Tarcoveanu, Florin Leon, Silvia Curteanu, Dorin Chiselita, Camelia-Margareta Bogdanici, Nicoleta Anton (2022). Classification Algorithms Used in Predicting Glaucoma Progression. *Healthcare*, vol. 10, no. 10, article number 1831, 20 pag., ISSN 2227-9032, DOI 10.3390/healthcare10101831, IF 2.8, Q2
 23. Marius Gavrilescu, Sabina-Adriana Floria, Florin Leon, Silvia Curteanu (2022). A Hybrid Competitive Evolutionary Neural Network Optimization Algorithm for a Regression Problem in Chemical Engineering. *Mathematics*, vol. 10, no. 19, article number 3581, 31 pag., ISSN 2227-7390, DOI 10.3390/math10193581, IF 2.592, Q1
 24. Sabina-Adriana Floria, Marius Gavrilescu, Florin Leon, Silvia Curteanu (2022). Ensembles of Biologically Inspired Optimization Algorithms for Training Multilayer Perceptron Neural Networks. *Applied Sciences*, vol. 12, no. 19, article number 9997, 22 pag., ISSN 2076-3417, DOI 10.3390/app12199997, IF 2.7, Q2
 25. Simona-Ruxandra Volovat, Iolanda Augustin, Daniela Zob, Diana Boboc, Florin Amurariti, Constantin Volovat, Cipriana Stefanescu, Cati-Raluca Stolniceanu, Manuela Ciocoiu, Eduard-Alexandru Dumitras, Mihai Danciu, Delia-Gabriela Ciobanu-Apostol, Vasile Drug, Sinziana Al-Shurbaji, Lucia-Georgiana Coca, Florin Leon, Adrian Iftene, Paul-Corneliu Herghelegiu (2022). Use of Personalized Biomarkers in Metastatic Colorectal Cancer and the Impact of AI. *Cancers*, vol. 14, no. 19, article number 4834, 45 pag., ISSN 2072-6694, DOI 10.3390/cancers14194834, IF 5.2, Q2
 26. Petru Cascaval, Florin Leon (2022). Optimization Methods for Redundancy Allocation in Hybrid Structure Large Binary Systems. *Mathematics*, vol. 10, no. 19, article number 3698, 31 pag., ISSN 2227-7390, DOI 10.3390/math10193698, IF 2.592, Q1
 27. Dumitru-Daniel Vecliuc, Florin Leon, Doina Logofatu (2022). A Comparison between Task Distribution Strategies for Load Balancing Using a Multiagent System. *Computation*, vol. 10, no. 12, article number 223, 20 pag., ISSN 2079-3197, DOI 10.3390/computation10120223, IF 2.2, Q2
 28. Silvia Curteanu, Florin Leon, Andra-Maria Mircea-Vicoveanu, Doina Logofatu (2021). Regression Methods Based on Nearest Neighbors with Adaptive Distance Metrics Applied to a Polymerization Process. *Mathematics*, vol. 9, no. 5, article number 547, 20 pag., ISSN 2227-7390, DOI 10.3390/math9050547, IF 2.592, Q1
 29. Florin Leon, Marius Gavrilescu (2021). A Review of Tracking and Trajectory Prediction Methods for Autonomous Driving. *Mathematics*, vol. 9, no. 6, article number 660, 37 pag., ISSN 2227-7390, DOI 10.3390/math9060660, IF 2.592, Q1
 30. Sabina-Adriana Floria, Florin Leon (2021). A Novel Information Diffusion Model Based on Psychosocial Factors with Automatic Parameter Learning. *Computer Science and Information Systems*, vol. 18, no. 3, pp. 703-728, ISSN 1820-0214, DOI 10.2298/csis200415050f, IF 1.4, Q4
 31. Costel Anton, Silvia Curteanu, Catalin Lisa, Florin Leon (2021). Machine Learning Methods Applied for Modeling the Process of Obtaining Bricks Using Silicon-Based Materials. *Materials*, vol. 14, no. 23, article number 7232, 14 pag., eISSN 1996-1944, DOI 10.3390/ma14237232, IF 3.4, Q2
 32. Andra-Maria Mircea-Vicoveanu, Elena Rezus, Florin Leon, Silvia Curteanu (2021). Analyzing Tuberculosis Reactivation in Patients with Rheumatoid Arthritis and Ankylosing Spondylitis Treated with Biological Therapy Using Machine Learning

- Methods. Applied Sciences, vol. 11, no. 23, article number 11400, 24 pag., ISSN 2076-3417, DOI 10.3390/app112311400, IF 2.7, Q2
33. Carmen Zaharia, Florin Leon, Silvia Curteanu, Eugenia-Teodora Iacob-Tudose (2021). Textile Wastewater Treatment in a Spinning Disc Reactor: Improved Performances—Experimental, Modeling and SVM Optimization. *Processes*, vol. 9, no. 11, article number 2003, 23 pag., ISSN 2227-9717, DOI 10.3390/pr9112003, IF 3.5, Q2
 34. Costin Badica, Florin Leon, Amelia Badica (2020). Freight Transportation Broker Agent Based on Constraint Logic Programming. *Evolving Systems*, vol. 11, pp. 363-382, ISSN 1868-6478, eISSN 1868-6486, DOI 10.1007/s12530-018-9230-3, IF 3.2, Q3
 35. Elena Niculina Dragoi, Silvia Curteanu, Florin Leon, Ghasem Azarian, Kazem Godini, Lucian Eva, Vlad Dafinescu, Mihaela Dana Turliuc (2020). Optimization of Chlorophyll A Removal from Wastewaters Using Bio-inspired Algorithms. *Environmental Engineering and Management Journal*, vol. 19, issue 2, pp. 311-323, ISSN 1582-9596, eISSN 1843-3707, DOI 10.30638/eemj.2020.029, IF 1.1, Q4
 36. Florin Leon, Petru Cascaval, Costin Badica (2020). Optimization Methods for Redundancy Allocation in Large Systems. *Vietnam Journal of Computer Science*, vol. 7, no. 3, pp. 281-299, ISSN 2196-8888, DOI 10.1142/s2196888820500165, IF 0.9, Q4
 37. Florin Leon, Costin Badica (2019). Expressing Multiagent Coalition Structure Problems for Optimisation by Quantum Annealing. *Enterprise Information Systems*, vol. 13, no. 7-8, pp. 959-978, Taylor and Francis, ISSN 1751-7575, eISSN 1751-7583, DOI 10.1080/17517575.2018.1552993, IF 4.4, Q1
 38. Fitore Muharemi, Doina Logofatu, Florin Leon (2019). Machine Learning Approaches for Anomaly Detection of Water Quality on a Real-World Data Set. *Journal of Information and Telecommunication*, vol. 3, no. 3, pp. 294-307, Taylor and Francis, ISSN 2475-1839, eISSN 2475-1847, DOI 10.1080/24751839.2019.1565653, IF 2.7, Q2
 39. Sabina-Adriana Floria, Florin Leon, Doina Logofatu (2019). A Model of Information Diffusion in Dynamic Social Networks Based on Evidence Theory. *Journal of Intelligent and Fuzzy Systems*, vol. 37, no. 6, pp. 7369-7381, IOS Press, ISSN 1064-1246, eISSN 1875-8967, DOI 10.3233/jifs-179346, IF 2.0, Q4
 40. Elvira Popescu, Florin Leon (2018). Predicting Academic Performance Based on Learner Traces in a Social Learning Environment. *IEEE Access*, vol. 6, pp. 72774-72785, eISSN 2169-3536, DOI 10.1109/access.2018.2882297, IF 3.9, Q2
 41. Florin Leon, Silvia Curteanu (2017). Large Margin Nearest Neighbour Regression Using Different Optimization Techniques. *Journal of Intelligent and Fuzzy Systems*, vol. 32, issue 2, pp. 1321-1332, IOS Press, ISSN 1064-1246, DOI 10.3233/jifs-169130, IF 2.0, Q4
 42. Roxana-Elena Ghitescu, Silvia Curteanu, Camelia Mihailescu, Irina Volf, Florin Leon, Andrei I. Gilca, Valentin I. Popa (2017). Support Vector Machine Combined with Genetic Algorithm for Optimization of Microwave-assisted Extraction of Polyphenols from Spruce Wood Bark. *Cellulose Chemistry and Technology*, vol. 51, issue 3-4, pp. 203-213, ISSN 0576-9787, IF 1.3, Q2
 43. Florin Leon, Costin Badica (2017). An Optimization Web Service for a Freight Brokering System. *Service Science*, vol. 9, no. 4, pp. 324-337, ISSN 2164-3962, DOI 10.1287/serv.2017.0191, IF 2.3, Q3
 44. Georgiana Bunea, Florin Leon, Gabriela Maria Atanasiu (2016). Postdisaster Evacuation Scenarios Using Multiagent System. *Journal of Computing in Civil Engineering*, vol. 30,

issue 6, pp. 05016002-1 - 05016002-10, ISSN 0887-3801, DOI 10.1061/(asce)cp.1943-5487.0000575, IF 6.9, Q1

45. Mohsen Pirdashti, Kamyar Movagharnejad, Poorya Mobalegholeslam, Silvia Curteanu, Florin Leon (2016). Phase Equilibrium and Physical Properties of Aqueous Mixtures of Poly (vinyl pyrrolidone) with Trisodium Citrate, Obtained Experimentally and by Simulation. *Journal of Molecular Liquids*, vol. 223, pp. 903-920, Elsevier, ISSN 0167-7322, DOI 10.1016/j.molliq.2016.07.118, IF 6.0, Q1
46. Joel S.E. Teo, Jan-Dirk Schmocker, Florin Leon, Joe Y-T Li, Jun Ji, Gabriela Maria Atanasiu, Eiichi Taniguchi (2015). Agent-based Evacuation Model Considering Field Effects and Government Advice. *Transportation Research Record: Journal of the Transportation Research Board*, issue 2532, pp. 129-140, ISSN 0361-1981, DOI 10.3141/2532-15, IF 1.7, Q3
47. Raluca Maria Hlihor, Mariana Diaconu, Florin Leon, Silvia Curteanu, Teresa Tavares, Maria Gavrilescu (2015). Experimental Analysis and Mathematical Prediction of Cd(II) Removal by Biosorption Using Support Vector Machines and Genetic Algorithms. *New Biotechnology*, vol. 32, issue 3, pp. 358-368, Elsevier, ISSN 1871-6784, DOI 10.1016/j.nbt.2014.08.003, IF 5.4, Q1
48. Florin Leon (2015). Stabilization Methods for a Multiagent System with Complex Behaviours. *Computational Intelligence and Neuroscience*, Article Number 236285, 20 pages, ISSN 1687-5265, DOI 10.1155/2015/236285, IF 3.12, Q2
49. Romeu Chelariu, Gabriel Dan Suditu, Daniel Mareci, Georgiana Bolat, Nicanor Cimpoesu, Florin Leon, Silvia Curteanu (2015). Prediction of Corrosion Resistance of Some Dental Metallic Materials with an Adaptive Regression Model. *The Journal of the Minerals, Metals and Materials Society (JOM)*, vol. 67, no. 4, pp. 767-774, Springer US, ISSN 1047-4838, DOI 10.1007/s11837-015-1362-3, IF 2.6, Q1
50. Silvia Curteanu, Mirela Smarandoiu, Doina Horoba, Florin Leon (2014). Naphthalene Sublimation. Experiment and Optimisation Based on Neuro-Evolutionary Methodology. *Journal of Industrial and Engineering Chemistry*, vol. 20, issue 4, pp. 1608-1611, Elsevier, ISSN 1226-086X, DOI 10.1016/j.jiec.2013.08.007, IF 6.1, Q1
51. Florin Leon (2014). Design and Evaluation of a Multiagent Interaction Protocol Generating Behaviours with Different Levels of Complexity. *Neurocomputing*, vol. 146, pp. 173-186, ISSN 0925-2312, DOI 10.1016/j.neucom.2014.04.058, IF 6.0, Q2
52. Daniel Mareci, Daniel Sutiman, Romeu Chelariu, Florin Leon, Silvia Curteanu (2013). Evaluation of the Corrosion Resistance of New ZrTi Alloys by Experiment and Simulation with an Adaptive Instance-Based Regression Model. *Corrosion Science*, vol. 73, pp. 106-122, Elsevier, ISSN 0010-938X, DOI 10.1016/j.corsci.2013.03.030, IF 8.3, Q1
53. Cristina Butnariu, Catalin Lisa, Florin Leon, Silvia Curteanu (2013). Prediction of Liquid-Crystalline Property Using Support Vector Machine Classification. *Journal of Chemometrics*, vol. 27, issue 7-8, pp. 179-188, John Wiley and Sons, ISSN 1099-128X, DOI 10.1002/cem.2508, IF 2.4, Q1
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55. Florin Leon, Ciprian-George Piuleac, Silvia Curteanu, Ioannis Poullos (2012). Instance-Based Regression with Missing Data Applied to a Photocatalytic Oxidation Process.

- Central European Journal of Chemistry, vol. 10, no. 4, pp. 1149-1156, ISSN 1895-1066, DOI 10.2478/s11532-012-0038-x, IF 1.46, Q3
56. Renata Furtuna, Silvia Curteanu, Florin Leon (2012). Multi-objective Optimization of a Stacked Neural Network Using an Evolutionary Hyper-heuristic. *Applied Soft Computing*, vol. 12, issue 1, pp. 133-144, Elsevier, ISSN 1568-4946, DOI 10.1016/j.asoc.2011.09.001, IF 8.7, Q1
 57. Renata Furtuna, Silvia Curteanu, Florin Leon (2011). An Elitist Non-Dominated Sorting Genetic Algorithm Enhanced with a Neural Network Applied to the Multi-Objective Optimization of a Polysiloxane Synthesis Process. *Engineering Applications of Artificial Intelligence*, vol. 24, pp. 772-785, Elsevier, ISSN 0952-1976, DOI 10.1016/j.engappai.2011.02.004, IF 8.0, Q1
 58. Elena-Niculina Dragoi, Silvia Curteanu, Florin Leon, Anca-Irina Galaction, Dan Cascaval (2011). Modeling of Oxygen Mass Transfer in the Presence of Oxygen-Vectors Using Neural Networks Developed by Differential Evolution Algorithm. *Engineering Applications of Artificial Intelligence*, vol. 24, issue 7, pp. 1214-1226, Infrastructures and Tools for Multiagent Systems, Elsevier, ISSN 0952-1976, DOI 10.1016/j.engappai.2011.06.004, IF 8.0, Q1
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 60. Ciprian George Piuleac, Ioannis Poullos, Florin Leon, Silvia Curteanu, A. Kouras (2010). Modeling Methodology Based on Stacked Neural Networks Applied to the Photocatalytic Degradation of Triclopyr. *Separation Science and Technology*, Taylor and Francis, USA, vol. 45, pp. 1644-1650, ISSN 0149-6395, DOI 10.1080/01496395.2010.487736, IF 2.8, Q3
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 63. Mihai Horia Zaharia, Florin Leon (2009). Speech Therapy Based on Expert System. *Advances in Electrical and Computer Engineering*, no. 1, pp. 74-77, Suceava, Romania, ISSN 1582-7445, IF 0.8, Q4
 64. Silvia Curteanu, Florin Leon (2008). Optimization Strategy Based on Genetic Algorithms and Neural Networks Applied to a Polymerization Process. *International Journal of Quantum Chemistry*, vol. 108, pp. 617-630, Wiley Periodicals, USA, ISSN 0020-7608, DOI 10.1002/qua.21376, IF 2.2, Q2
 65. Florin Leon, Mihai Horia Zaharia, Dan Galea (2008). Emergent Dynamic Routing Using Intelligent Agents in Mobile Computing. *Studies in Informatics and Control*, vol. 17, no. 2, pp. 215-224, Informatics and Control Publications, ISSN 1220-1766, IF 1.6, Q4
 66. Florin Leon, Silvia Curteanu, Catalin Lisa, Nicolae Hurduc (2007). Machine Learning Methods Used to Predict the Liquid-Crystalline Behavior of Some Copolyethers.

- Molecular Crystals and Liquid Crystals, vol. 469, pp. 1-22, Taylor and Francis Group, USA, ISSN 1542-1406, DOI 10.1080/15421400701431232, IF 0.7, Q4
67. Florin Leon, Silvia Curteanu (2007). Multiobjective Optimization of a Free Radical Polymerization - Genetic Algorithms. *Materiale plastice*, vol. 44, no. 2, pp. 129-137, ISSN 0025-5289, IF 0.8, Q4
 68. Silvia Curteanu, Florin Leon, Dan Galea (2006). Alternatives for Multiobjective Optimization of a Polymerization Process. *Journal of Applied Polymer Science*, vol. 100, issue 5, pp. 3680-3695, Wiley Periodicals, USA, ISSN 0021-8995, DOI 10.1002/app.23205, IF 3.0, Q2
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F2 - lucrări BDI

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2. Mihai Horia Zaharia, Florin Leon, Dan Galea (2004). Symbolic Deductive Reasoning Using Connectionist Models. *Computer Science Journal of Moldova*, vol. 12, no. 1 (34), pp. 127-145, ISSN 1561-4042 (DBLP)

G. Lucrări științifice publicate în reviste din străinătate.

H. Lucrări științifice publicate în reviste din țară, recunoscute CNCSIS

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- Optimization. Proceedings of the 27th International Conference on System Theory, Control and Computing (ICSTCC 2023), Timisoara, Romania, October 2023, pp. 161-166, eISBN 979-8-3503-3798-3, DOI 10.1109/icstcc59206.2023.10308486 (IEEE Xplore)
9. Codrut-Georgian Artene, Marius-Nicolae Tibeica, Florin Leon (2021). Using BERT for Multi-Label Multi-Language Web Page Classification. Proceedings of the 17th International Conference on Intelligent Computer Communication and Processing (ICCP 2021), Cluj-Napoca, Romania, October 2021, pp. 307-312, ISBN 978-1-6654-0976-6, DOI 10.1109/iccp53602.2021.9733492 (IEEE Xplore)
 10. Oksana Nikiforova, Nisrine El Marzouki, Konstantins Gusarovs, Hans Vangheluwe, Tomas Bures, Rima Al-Ali, Mauro Iacono, Priscill Orue Esquivel, Florin Leon (2017). The Two-Hemisphere Modelling Approach to the Composition of Cyber-Physical Systems. Proceedings of the 12th International Conference on Software Technologies, ICSoft 2017, Madrid, Spain, pp. 286-293, ISBN 978-989-758-262-2, DOI 10.5220/0006424902860293 (Scopus)
 11. Florin Leon, Gabriela Maria Atanasiu, Georgiana Bunea (2015). Critical Assessment of Road Network Resilience Using an Agent-Based Evacuation Model. Proceedings of the 7th Balkan Conference on Informatics Conference, BCI '15, Craiova, Romania, published by ACM, New York, USA, ISBN 978-1-4503-3335-1, DOI 10.1145/2801081.2801107 (ACM Digital Library)
 12. Florin Leon, Andrei Marius Burlacu (2013). Neural Network Approximations of Solution Concepts for Multiagent Coalitions. Proceedings of the IEEE 12th International Symposium on Parallel and Distributed Computing, ISPDC 2013, Bucuresti, Romania, pp. 216-223, ISBN 978-1-4799-2967-2, DOI 10.1109/ispdc.2013.36 (IEEE Xplore)
 13. Florin Leon (2012). Real-Valued Quantum-Inspired Evolutionary Algorithm for Multi-Issue Multi-Lateral Negotiation. Proceedings of 2012 IEEE 8th International Conference on Intelligent Computer Communication and Processing, ICCP 2012, pp. 41-48, Cluj-Napoca, Romania, ISBN 978-1-4673-2951-4 (IEEE Xplore)
 14. Florin Leon (2012). A Quantum-Inspired Evolutionary Algorithm for Multi-Attribute Combinatorial Auctions. Proceedings of 2012 16th International Conference on System Theory, Control and Computing, ICSTCC 2012, Sinaia, Romania, ISBN 978-606-834-848-3 (IEEE Xplore)
 15. Florin Leon, Bogdan Ioan Aignatoaiei, Andrei Dan Leca (2011). An Evolutionary Optimization Framework for Intelligent Agents. Proceedings of the 15th International Conference on System Theory, Control and Computing (Joint Conference SINTES 15, SACCS 11, SIMSIS 15), pp. 306-311, ISBN 978-973-621-323-6 (IEEE Xplore)

J. Inventii

Lucrări înscrise în Registrul Național de Opere administrat de Oficiul Român pentru Drepturi de Autor (înregistrate personal)

1. Silvia Curteanu, Florin Leon, Marius Gavrilescu, Nicoleta Anton, Catalin Lisa, Filip Tarcoveanu, Neural Networks Designed in Pytorch for the Prediction of Glaucoma Evolution, nr. 4867 / 29.11.2023

2. Silvia Curteanu, Florin Leon, Marius Gavrilescu, Software Framework for Solving Regression Problems Using Individual Algorithms and Algorithms Combined in Ensembles, nr. 4813 / 24.11.2023
3. Silvia Curteanu, Marius Gavrilescu, Catalin Lisa, Florin Leon, Costel Anton, Sabina-Adriana Floria, Modeling the Brick Manufacturing Process Using Ensembles of Biologically and Socially Inspired Evolutionary Methods, nr. 4805 / 23.11.2023
4. Silvia Curteanu, Florin Leon, Marius Gavrilescu, Costel Anton, Catalin Lisa, Sabina-Adriana Floria, Using Biologically Inspired Algorithms to Minimize Emissions in the Bricks Obtaining Process, nr. 4670 / 15.11.2023
5. Florin Leon, Silvia Curteanu, Nearest Neighbor Regression Algorithm with Adaptive Distance Metrics Trained by Multiple Point Hill Climbing on Noisy Training Set, nr. 6573 / 15.10.2018
6. Silvia Curteanu, Florin Leon, Large Margin Nearest Neighbor Regression Algorithm (LMNNR), nr. 4951 / 23.08.2018
7. Florin Leon, Silvia Curteanu, Algoritm adaptiv pentru regresie bazat pe paradigma celor mai apropiati vecini (AKNN), nr. 6232 / 24.07.2013
8. Silvia Curteanu, Florin Leon, Artificial Intelligence Toolbox. Neural Network Topology, nr. 14226 / 26.10.2010
9. Florin Leon, Silvia Curteanu, Algoritmi genetici. Optimizare scalară multi-obiectiv, nr. 14404 / 5.11.2010
10. Florin Leon, Silvia Curteanu, Stacked Neural Networks, nr. 14506 / 12.11.2010

K. Contracte de cercetare/granturi

Director, responsabil științific

1. Director: DigitAll: Innovation Center for Artificial Intelligence, contract no. GI-TD-DigitAll-03/2022, internal grant of TUIASI, period: 2022-2023
2. Director: Proreta 5, contracts no. 10118/16.05.2019, 1721/23.01.2020, 12371/21.05.2021, 15290/11.05.2022 with Continental, period: 2019-2022
3. Director: BEPALIA: Behavioural Patterns Library for Intelligent Agents Used in Engineering and Management / Biblioteca de modele comportamentale pentru agenti inteligenti cu utilizare in inginerie si management, PNII, IDEI, code 316/2008, contract no. 671/19.01.2009, period: 2009-2011, budget: 402,130.38 RON
4. Scientific leader: ROADERS: Road Networks for Earthquake Resilient Societies, ERA-NET CONCERT Japan project, contract no. 3003/2013 in the Partnership Module of UEFISCDI, period: 2013-2015

Membru, proiecte internaționale

5. DocTalent4EU: Transforming Europe through Doctoral Talent and Skills Recognition, Horizon-Widera-2022, GA no. 10109592, period: 2023-2024, TUIASI coordinator: Alina-Adriana Minea
6. VolEvol: Generation of Meaningful Representations of Volume Data Through Evolutionary Learning, Horizon 2020 Programme, EU.2.1.1, grant no. 951911, period: 2023-2024, TUIASI research group leader: Marius Gavrilescu

7. FiDisD: Fighting Disinformation Using Decentralized Actors Featuring AI and Blockchain Technologies, grant no. 957228, Horizon 2020 Programme, TruBlo call - Trusted and Reliable Content for Future Blockchains, period: 2022-2023, TUIASI research group leader: Cristian-Nicolae Butincu
8. REVERT: taRgeted thErapy for adVanced colorEctal canceR paTients, Horizon 2020 project, code 848098, period: 2021-2023, TUIASI research group leader: Paul-Corneliu Herghelegiu
9. Member in Romanian management committee: MPM4CPS: Multi-Paradigm Modelling for Cyber-Physical Systems, ICT COST Action IC1404, period: 2014-2018
10. SERIES: Seismic Engineering Research Infrastructures for European Synergies, FP7 project no. 227887/2009, period: 2009-2012, TUIASI research group leader: Gabriela Maria Atanasiu
11. EFAST: Design Study of a European Facility for Advanced Seismic Testing, FP7 project no. 212109/2007, period: 2008-2011, TUIASI research group leader: Gabriela Maria Atanasiu
12. Assistant coordinator: Quality Culture Project, European University Association (EUA), Round III, Network 3, Implementing Bologna Reforms, DG EC AGR n. 2004-3922/001-001 S02-81AWB, period: 2005-2006, network coordinator: Gabriela Maria Atanasiu

Membru, proiecte naționale

13. HRIA: Romanian Hub for Artificial Intelligence / Hub roman de inteligenta artificiala, contract PCIDIF no. G 2025 - 22801/390012, code SMIS 351416, period: 2025-2029, TUIASI research group leader: Vasile-Ion Manta
14. Tangrama Medvolution: We Evolve Together for Better Health, Redefining Innovation in Medicine / Evoluam impreuna pentru o sanatate mai buna, redefinind inovatia in medicina, contract no. 730/10.07.2025, code SMIS 338516, period: 2025-2027, TUIASI research group leader: Adrian Alexandrescu
15. FluidExAp: New Heat Transfer Fluids for Heat Exchange Applications / Noi fluide de transfer termic in operatii de schimb de caldura, type PCE, no. 18 PCE/08.01.2025, period: 2025-2027, director: Alina-Adriana Minea
16. HAVOC: From human to virus. Optimization algorithms with applications in chemical engineering / De la om la virus. Algoritmi de optimizare cu aplicatii in ingineria chimica, contract: PN III PCE nr. 91/2021, period: 2021-2023, budget: 1,197,721 RON, director: Silvia Curteanu
17. Mentor: NORAN: Increasing the fire resistance of buildings through the use of nanostructures and AI-based analysis of their impact in human evacuation / Cresterea rezilientei la incendiu a constructiilor prin utilizarea nanostructurilor si analiza bazata pe IA a impactului acestora in evacuarea umana, Postdoctoral proiect, period: 2022-2023, director/postdoctoral fellow: Georgiana Bunea
18. BIO-UP: Biotrickling filtration upgrade in the context of atmospheric protection and climate change / Upgradarea filtrarii prin biotrickling in contextul protectiei atmosferei si a schimbarilor climatice, contract: PN-III-P2-2.1-PED-2019-1165, period: 2020-2022, director: Gabriela Soreanu
19. BIA-CHEM: Biologically-inspired algorithms developed for modeling and optimizing complex chemical processes / Algoritmi de inspiratie biologica dezvoltati pentru

- modelarea si optimizarea unor procese chimice complexe, contract: PN-III-P4-ID-PCE-2016-0322, no. 51/2017, Exploratory reseach project, period: 2017-2019, budget: 847,443 RON, director: Silvia Curteanu
20. Mentor: BIO-FRAM-TEST: Framework for testing biologically-inspired algorithms / Framework pentru testarea algoritmilor de inspiratie biologica, contract: PN-III-P1-1.1-PD-2016-1399, Postdoctoral proiect, period: 2017-2019, director/postdoctoral fellow: Elena-Niculina Dragoi
 21. Scientific leader: AISoftChim: Software products based on artificial intelligence algorithms with applications in modelling and optimization of chemical systems / Produe software bazate pe algoritmi de inteligenta artificiala cu aplicatii in modelarea si optimizarea sistemelor chimice, contract: PN-II-PT-PCCA-2011-32-0732, no. 23/2012, Collaborative project for applied research, period: 2012-2016, budget: 1,580,081 RON, director: Silvia Curteanu
 22. INTELCHIM: Modelling and automated control using artificial intelligence tools for applications in chemistry and process engineering / Modelare si conducere automata utilizand instrumente ale inteligentei artificiale pentru aplicatii in chimie si inginerie de proces, PN II, partnerships in priority areas, PC, contract no. 71006/18.09.2007, period: 2007-2010, budget: 1,650,000 RON, director: Silvia Curteanu
 23. Soft computing hybrid configurations with chemistry applications / Configuratii hibride soft computing cu aplicatii in chimie, PNII, exploratory research project, IDEI, code ID-592, contract no. 59 / 1.10.2007, period: 2007-2010, budget: 900,000 RON, director: Silvia Curteanu
 24. e-KnowRiskSafe: Diagnosis of urban infrastructure vulnerability to natural disasters and integrated risk k management. Application for Iasi City / Diagnoza vulnerabilitatii infrastructurii urbane la dezastrre naturale si k-managementul riscului integrat. Aplicatie pentru Municipiul Iasi, PN II, partnerships in priority areas, PC, contract no. 31065/2007, period: 2007-2010, budget: 1,860,000 RON, director: Gabriela Maria Atanasiu
 25. CERSIS: Research on seismic risk assessment and developing a conceptual and operational model for estimating losses using information systems / Cercetari privind evaluarea riscului seismic si elaborarea unui model conceptual si functional pentru estimarea pierderilor utilizand sistemele informationale, PN II, partnerships in priority areas, PC, contract no. 31023/2007, period: 2007-2010, budget: 1,919,600 RON, director: Radu Vacareanu (Technical University of Civil Engineering Bucharest, Romania)
 26. Artificial intelligence techniques applied to the processes of synthesis and complexation of functionalized polysiloxanes / Tehnici ale inteligentei artificiale aplicate proceselor de sinteza si complexare a polisiloxanilor functionalizati, CNCSIS contract no. 63 GR/2006, topic 10, code CNCSIS 225, period: 2006-2007, budget: 110,000 RON, director: Silvia Curteanu
 27. Academic grid for complex applications / GRID Academic pentru aplicatii complexe, contract no. 74 - CEEX II03/31.07.2006, beneficiary MEC - INFOSOC, period: 2006-2008, budget: 1,500,000 RON, director: Mitica Craus
 28. NANOSIMAT: Multifunctional nanostructured silicon materials / Materiale siliconice nanostructurate multifunctionale, CEEX contract no. 52/2006, MATNANTECH programme, subcontract 1, period: 2006-2008, budget: 1,250,000 RON, director: Maria Cazacu, TUIASI leader: Silvia Curteanu

29. Distributed dissemination system on a grid architecture, equipped with intelligent agents for automated construction and updating of the documentary fund and knowledge extraction tools / Sistem de informare distribuit pe o arhitectura grid, dotat cu agenti inteligenti pentru constructia si actualizarea automata a fondului documentar si cu instrumente de extragere de cunostinte, research contract CNCSIS code 575, topic 17, period: 2005-2006, budget: 126,000 RON, director: Mitica Craus
30. Prototype system for dynamic resource management in distributed mobile computing using intelligent agents / Prototip de sistem pentru gestiunea dinamica a resurselor distribuite in mobile computing folosind agenti inteligenti, CNCSIS AT project, topic 67, code 66/25.02.2005, period: 2005-2006, budget: 24,000 RON, director: Mihai Horia Zaharia
31. Management of Seismic Vulnerability of Built Urban Fund Using Spatial Information Infrastructure / Managementul vulnerabilitatii seismice a fondului urban construit utilizand Infrastructura de Informatii Spatiale (IIS), CEEEX project no. 3202/2005, PD type, supporting postdoctoral programmes, UEFISCSU, period: 2005-2007, budget: 520,000 RON, director: Gabriela Maria Atanasiu, function in the project: postdoctoral research fellow
32. NANOPOL: Nanostructured polymeric composite materials used in environmental monitoring / Materiale compozite nanostructurate polimerice cu utilizare in monitorizarea mediului, subcontract: Modelling and optimization with neural networks and genetic algorithms / Modelare si optimizare cu retele neuronale si algoritmi genetici, CEEEX contract 10/10.2005, MATNANTECH programme, subcontract 3, period: 2005-2008, budget: 1,000,000 RON, director: Gabriela Telipan, TUIASI leader: Silvia Curteanu
33. Viscometric behaviour modelling of binary liquid systems using neural networks / Modelarea comportarii viscozimetrice a sistemelor lichide binare cu ajutorul retelor neuronale, beneficiary MEC, CNCSIS code 65, period: 2004, budget: 50,000,000 ROL, director: Gabriela Lisa
34. The prototype of an intelligent web GIS system for extracting knowledge from databases using intelligent agents / Prototipul unui sistem GIS web inteligent pentru extragerea cunostintelor din baze de date folosind agenti inteligenti, CNCSIS contract 66, topic 76, period: 2004, budget: 110,000,000 ROL, director: Mihai Horia Zaharia
35. Integrated software system for monitoring the legal regime of land – a tool for development decision making in agriculture, forestry, fisheries, hydrological and environmental areas / Sistem software integrat pentru monitorizarea regimului juridic al terenurilor - instrument pentru fundamentarea politicilor de dezvoltare in sectoarele agricol, silvic, piscicol, hidrologic si de protectia mediului, RELANSIN programme, priority projects PP6, partner P4 in contract no. 1933 / 15.09.2004, period: 2004, budget: subcontract 80,000,000 ROL, group leader: Mihai Horia Zaharia
36. Models of extracting knowledge from databases using grid technologies and intelligent agents / Modele de extragere de cunostinte in baze de date folosind tehnologii grid si agenti inteligenti, contract no. 139/07.09.2004, InfoSoc programme, sub-programme C6, category PF, period: 2004-2005, director: Mitica Craus
37. Using neural networks and genetic algorithms in polymerization reactions engineering. Applications to modelling and optimizing the synthesis of polysiloxanes / Utilizarea retelor neuronale si a algoritmilor genetici in ingineria reactiilor de polimerizare. Aplicatii la modelarea si optimizarea sintezei polisiloxanilor, CERES contract no. 4-

- 22/2004, beneficiary: Institute of Atomic Physics, Bucharest, Romania, period: 2004-2006, budget: 672,470,000 ROL, director: Silvia Curteanu
38. Multiphase polymer materials - biodegradable, biocompatible, bioactive, artificial motile systems - with applications in medicine and environmental protection / Materiale polimere multifazice - biodegradabile, biocompatibile, biologic active, sisteme motile artificiale - cu aplicatii in medicina si pentru asigurarea protectiei mediului, CERES contract no. 3-51/2003, beneficiary: Institute of Atomic Physics, Bucharest, Romania, period: 2003-2005, budget: 450,000,000 ROL, director: Bogdan Simionescu
39. Multidisciplinary research in the field of information technologies based on genetic algorithms, neural networks and fuzzy systems with applications to engineering and management / Cercetari multidisciplinare in domeniul tehnologiilor informationale bazate pe algoritmi genetici, retele neuronale si sisteme fuzzy cu aplicatii pentru inginerie si management, CERES contract no. 29/12.11.2002, beneficiary: Institute of Atomic Physics, Bucharest, Romania, period: 2002-2004, budget: 1,064,320,000 ROL, director: Octav Brudaru
40. Contributions to the radical polymerization of styrene by modelling, computer simulation and optimization / Contributii la studiul polimerizarii radicalice a stirenului prin modelare, simulare pe calculator si optimizare, CERES contract no. 47/15.10.2001, beneficiary: Institute of Atomic Physics, Bucharest, Romania, period: 2001-2004, budget: 800,000,000 ROL, director: Victor Bulacovschi

L. Premii, distincții

1. Premierea articolului "The Effect of Collaborative Behaviors in Emergency Evacuation", Premierea rezultatelor cercetării PRECISI 2023, 22 decembrie 2023, pag. 8, poz. 115
2. Premierea articolului "Machine Learning Methods Applied for Modeling the Process of Obtaining Bricks Using Silicon-Based Materials", Premierea rezultatelor cercetării PRECISI 2023, 22 decembrie 2023, pag. 46, poz. 641
3. Premierea articolului "Viscosity Deviation Modeling for Binary and Ternary Mixtures of Benzyl Alcohol-N-Hexanol-Water", Premierea rezultatelor cercetării PRECISI 2023, 22 decembrie 2023, pag. 194, poz. 2900
4. Premiere Orizont Europa – Echipa de cercetare (proiecte H2020), "Transforming Europe Through Doctoral Talent and Skills Recognition", DocTalent4EU, decembrie 2023, pag. 1, poz. 19
5. Premiul de excelență TUIASI pentru atragerea celor mai multe fonduri private pentru cercetarea științifică, 16 noiembrie 2022
6. Premierea articolului "Regression Methods Based on Nearest Neighbors with Adaptive Distance Metrics Applied to a Polymerization Process", Premierea rezultatelor cercetării PRECISI 2021, 27 octombrie 2021, pag. 286, poz. 1033
7. Premierea articolului "A Review of Tracking and Trajectory Prediction Methods for Autonomous Driving", Premierea rezultatelor cercetării PRECISI 2021, 27 octombrie 2021, pag. 195, poz. 744
8. Premierea articolului "Predicting Academic Performance Based on Learner Traces in a Social Learning Environment", Premierea rezultatelor cercetării PRECISI 2019, iulie 2019, poz. 152

9. Premiarea articolului “Support Vector Machine Combined with Genetic Algorithm for Optimization of Microwave-Assisted Extraction of Polyphenols from Spruce Wood Bark”, Premiarea rezultatelor cercetării PRECISI 2017, octombrie 2017, pag. 245, poz. 845
10. Premiarea articolului “Postdisaster Evacuation Scenarios Using Multiagent System”, Premiarea rezultatelor cercetării PRECISI 2016, decembrie 2016, pag. 53, poz. 183
11. Premiarea articolului “Prediction of Corrosion Resistance of Some Dental Metallic Materials with an Adaptive Regression Model”, Premiarea rezultatelor cercetării PRECISI 2015, noiembrie 2015, poz. 1057
12. Premiarea obținerii atestatului de abilitare, decembrie 2015, pag. 4, poz. 76

M. Alte realizări semnificative

Data: 2 martie 2026

Prof. dr. ing. Florin LEON