



PIULEAC CIPRIAN-GEORGE

1. Personal information

Name and surname: PIULEAC Ciprian-George

Date and place of birth: 14th of February 1980, Botosani.

Present academic position: Postdoctoral researcher.

Current address: Decebal 30, Bl. B6, Sc. B, Ap. 19, Iasi, Iasi

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2. Education

2006-2009 PhD Diploma, Thesis: "Artificial intelligence tools with applications in environmental protection", thesis supervisor prof.dr.ing. Silvia Curteanu.

1999–2004 Bachelor degree in Economic Engineering, Faculty of Industrial Chemistry, "Gheorghe Asachi" Technical University of Iasi.

1999 Baccalaureate, "Grigore Antipa" High School, Botoșani.

3. Professional experience

June, 2010 – present – postdoc researcher at "Gheorghe Asachi" Technical University of Iasi Faculty of Chemical Engineering and Environmental Protection.

2010 – present – research Center of Excelency's non-permanent member of Chemical, Biochemical and Advanced Materials Engineering from "Gheorghe Asachi" Technical University of Iasi Faculty of Chemical Engineering and Environmental Protection (<http://www.tuiasi.ro/facultati/ic/index.php?page=1231>).

2012 – 2 months - research stage at Complutense University of Madrid, Faculty of Chemical Sciences, Analytical Laboratory, Spain.

2011 – 2 months - research stage at de Castilla La Mancha University of Ciudad Real, Electrochemistry Laboratory, Spain.

2008 – 6 months - research stage at de Castilla La Mancha University of Ciudad Real, Electrochemistry Laboratory, Spain.

October 2008 – June 2009 – associate assistant at Applied Informatics, Faculty of Chemical Engineering and Environmental Protection, “Gheorghe Asachi” Technical University of Iasi.

April 2006 – May 2006 – engineer in Department of Textile Dyeing of S.C. Teba Industry S.A., Iasi.

March 2005 – May 2005 – pharmaceutical sales representative on Botosani of S.C. A&G Med Trading SRL, Bucharest.

4. Research interests

The research activity was focused on elaboration of modeling and optimization strategies based on neural networks and genetic algorithms. Different types of neural networks were used, individually or aggregated in stacks, being applied to processes selected from chemical engineering and environmental protection fields. Original methodology were developed: ten step modeling based on neural networks, optimization of a neural network stack, developing neural network topology using genetic algorithms.

5. Selected publications

Abbreviations: IF = Impact Factor, RS = Relative influence Score of the journal, PI-1 = Principal Investigator as paper's first author, PI-C = Principal Investigator as paper corresponding author.

Summary of the publications: Total no. of papers = 20 ; ISI indexed no. of papers =14; BDI no. = 3; no. of papers in conference volumes = 3; no. of contracts as execution member = 6.

Cumulative IF = 24.225; cumulative RS =10.84 .

Selected papers

1. Curteanu, S; Piuleac, CG; Godini, K; Azaryan, G; Modeling of electrolysis process in wastewater treatment using different types of neural networks, *Chemical Engineering Journal*, 172(1), 267-276, **2011 (F.I.= 3.074, RS=2.427)**.
2. Piuleac, CG ; Furtuna, R ; Pislaru, M ; Curteanu, S ,Neural Networks based Models Applied to an Electrocoagulation Process, *Environmental Engineering and Management Journal*, 10(3), 375-380, **2011 (IF= 1.435, RS=0)**.

3. Lisa, G ; Wilson, DA; Curteanu, S; Lisa, C; Piuleac, CG ; Bulacovschi, V, Ferrocene derivatives thermostability prediction using neural networks and genetic algorithms, *Thermochimica Acta*, 521(1-2), 26-36, **2011 (IF=1.908 , RS= 1.173)**.
4. Leon, F ; Piuleac, CG ; Curteanu, S, Stacked Neural Network Modeling Applied to the Synthesis of Polyacrylamide-Based Multicomponent Hydrogels, *Macromolecular Reaction Engineering*, 4(9-10), 591-598, **2010 (IF=1.701, RS= 1.054)**.
5. Piuleac, CG ; Curteanu, S, Different Methods of Neural Network Based Modelling for Polymerization Process *Materiale Plastice*, 47(3), 311-318, **2010**.
6. Lobato, J; Canizares, P; Rodrigo, MA; Piuleac, CG ; Curteanu, S ; Linares, JJ , Direct and inverse neural networks modelling applied to study the influence of the gas diffusion layer properties on PBI-based PEM fuel cells, *International Journal of Hydrogen Energy*, 35(15), 7889-7897, **2010 (IF=4.057, RS= 1.410)**.
7. Piuleac, CG ; Curteanu, S ; Cazacu, M , Optimization by NN-GA Technique of the Metal Complexing Process. Potential Application in Wastewater Treatment, *Environmental Engineering and Management Journal*, 9(2), 239-247, **2010 (IF= 1.435, RS=0)**.
8. Piuleac, CG ; Curteanu, S; Cazacu, M, Stacked Neural Network Modeling Applied to the Process of Metal Ion Sorption by the Functional Silica Xerogel, *Revue Roumaine de Chimie*, 55 (2), 85-97, **2010 (IF=0.311, RS=0.149)**.
9. Piuleac, CG ; Poullos, I; Leon, F ; Curteanu, S; Kouras, A , Modeling Methodology Based on Stacked Neural Networks Applied to the Photocatalytic Degradation of Triclopyr, *Separation Science and Technology*, 45(11), 1644-1650, **2010 (IF= 1.015, RS= 1.010)**.
10. Piuleac, CG ; Rodrigo, MA; Canizares, P; Curteanu, S; Saez, C , Ten steps modeling of electrolysis processes by using neural networks, *Environmental Modelling and Software*, 25(1), 74-81, **2010 (IF= 2.871, RS= 1.598)**.
11. Lobato, J; Canizares, P; Rodrigo, MA; Linares, JJ ; Piuleac, CG ; Curteanu, S , The neural networks based modeling of a polybenzimidazole-based polymer electrolyte membrane fuel cell: Effect of temperature, *Journal of Power Sources*, 192(1), 190-194, **2009 (IF= 4.290, RS= 2.044)**.
12. Piuleac, CG ; Poullos, I; Curteanu, S, Photocatalytic oxidation process of sulfamethazine. Modeling based on neural networks, *Environmental Engineering and Management Journal*, 8(3), 439-445, **2009 (IF= 1.435, RS=0)**.
13. Suditu, GD ; Secula, M ; Piuleac, CG ; Curteanu, S; Poullos, I, Genetic algorithms and neural networks based optimization applied to the wastewater decolorization by photocatalytic reaction, *Revista de Chimie*, 59(7), 816-825, **2008 (IF= 0.693, RS= 0.124)**.

14. Nistor, A ; Piuleac, CG ; Cazacu, M; Curteanu, S , Neural network modelling of the equilibrium anionic polymerization of cyclic siloxanes, *Materiale Plastice*, 45(1), 67-73, **2008**.
15. Piuleac, C.G.; Curteanu, S.; Ţelipan, G.; Cazacu, M., Neural network based modelling of NOx detection with a sensor – polymer system, *Scientific Study and Research*, 9(1), 35-48, **2008**.
16. Piuleac, C.G.; Curteanu, S.; Leon, F.; Modeling Methodology Based on Neural Networks Applied to an Electrochemical Treatment Wastewater Process, *Buletinul Universităţii Petrol – Gaze din Ploieşti*, LXI (3), 127 -132, **2009**.

Proceedings papers

17. Pislaru, M.; Trandabat, A. F.; Curteanu, S. ; Piuleac, C., Fuzzy Logic for Environmental Assessment, *Annals of DAAAM for 2010 & Proceedings of the 21st International DAAAM Symposium*, 20-23rd October 2010, Zadar, Croatia, ISSN 1726-9679, ISBN 978-3-901509-73-5, Katalinic, B. (Ed.), 1439-1440, Published by DAAAM International Vienna, Vienna, **2010**.
18. Piuleac, CG.; Pislaru, M ; Curteanu, S, Optimization Based on NN-GA Technique Applied to a Wastewater Purification Process, *Annals of DAAAM for 2010 & Proceedings of the 21st International DAAAM Symposium*, 20-23rd October 2010, Zadar, Croatia, ISSN 1726-9679, ISBN 978-3-901509-73-5, Katalinic, B. (Ed.), 1441-1442, Published by DAAAM International Vienna, Vienna, **2010**.
19. Piuleac, CG; Furtuna, R; Curteanu, S, Soft-Computing Methodology Based on Neural Network and Genetic Algorithm Applied to a Photocatalytic Decomposition Process, 221-232, *Buletinul Institutului Politehnic Iasi*, LVII(LXI),3, 2011, ISSN 0254-7104, **2011**.
20. Piuleac, CG, Curteanu, S, Cañizares, P, Rodrigo, MA, Pinar, JF, Úbeda, D, Linares, JJ; Lobato, J, Inverse neural networks based optimization of a PEMFC performances – Study of the Pt/C content effect, *Proceedings of the 4th European Fuel Cell Piero Lunghi Conference and Exhibition*, ENEA, Italian National Agency for Technologies, Energy and Sustainable Development, Eds: Viviana Gigolotti, Stefano Ubertini, Paola Lunghi, ISBN 978-88-8286-254-1, **2011**.

Selected contracts

1. Behavioural Patterns Library for Intelligent Agents Used in Engineering and Management, PNII Project, IDEI, code 316/2008, contract no. 671/19.01.2009, period: **2009-2011**.
2. Modeling and optimal control based on artificial intelligence tools for chemical and process engineering applications, PN II, grant no. 71 – 006/18.09.2007, **2007-2010**.

3. Softcomputing hybrid configurations applied in chemistry, PCE ID_592, grant 59/1.10.2007, **2007 – 2010**.
4. Artificial intelligence techniques applied to synthesis and complexing processes of functionalized polysiloxanes, grant CNCSIS, **2006-2008**.
5. High-performance multifunctional polymeric materials for medicine, pharmacy, microelectronics, energy storage/information environment, grant CNCSIS, **2006-2008**.
6. Artificial intelligence techniques applied to the processes of synthesis and complexation of functionalized polysiloxane, grant CNCSIS, **2006-2008**.