

LISTA LUCRĂRILOR ȘTIINȚIFICE

A. Teza de doctorat

A1. Popa C., *Contribuți privind reglarea ierarhică a procesului de cracare catalitică,* Universitatea Petrol-Gaze din Ploiești, 200 pg., Ploiești, 2009.

B. Cărți și capitole în cărți publicate

B1. Călin C., Sîrbu E.E., **Popa C.R.**, Bondarev A., Tănase M., *Application of machine learning tools for prediction of fertilizers/pesticides/dye adsorption onto agricultural waste-derived biochar/modified biochar for clean environment, capitol publicat în BIOCHAR-BASED CATALYSTS FOR REMOVAL OF ENVIRONMENTAL CONTAMINANTS, Advanced treatment Technologies Using Computational Tools, Edited by Kapoor T., Sillanpaa M., Editors ELSEVIER 2026, pp.200-224, ISBN 978-0-443-40447-4*

[Biochar-Based Catalysts for Removal of Environmental Contaminants - 1st Edition | Elsevier Shop](#)

B2. Popa C. R., Popescu C., *Metode Numerice. Aplicații Python și C++,* Editura Universității Petrol- Gaze Ploiești, 2024, pag 228, ISBN 978-973-719-915-7

B3. Popa C. R., *Programarea calculatoarelor, Aplicații Python,* Editura Universității Petrol- Gaze Ploiești, 2022, nr pag.108, ISBN 978-973-719-886-2

B4. Popa C., *Introducere în automatică și calculatoare, Îndrumar de laborator,* Editura Universității Petrol- Gaze Ploiești, 2022, nr pag. 105, ISBN 978-973-719-844-0.

B5. Popa C, *Proiectarea automatizării proceselor,* Editura Universității Petrol- Gaze Ploiești, 2021, nr pag. 195 ISBN 978-973-719-814-3;

B6. Popa C., *Tehnici de modelare și simulare,* Editura Universității Petrol- Gaze Ploiești, 2020, nr pag. 188, ISBN 978-973-719-782-5;

B7. Popa C., Doicin B. *Tehnici de modelare și simulare. Aplicații MATLAB.* Editura Universității Petrol- Gaze Ploiești, 2018.

- B8. Popa C.,** Doicin B., *Programarea calculatoarelor*, Editura Universității Petrol-Gaze din Ploiești, 2017, nr pag 205, ISBN: 978-973-719-684-2;
- B9. Popa C.,** Popa A., *Proiectarea automatizării proceselor- Aplicații practice*, Editura Universității Petrol-Gaze din Ploiești , 2017, nr. pag 120, ISBN: 978-973-719-685-9;
- B10. Popa C.,** *Conducerea ierarhică a procesului de cracare catalitică*, Editura MatrixRom, 2013, nr. pag 200. ISBN 978-973-755-968-5;
- B11. Popa C.,** *Noțiuni fundamentale de programare. Aplicații în ingineria chimică*, Editura Universității Petrol-Gaze din Ploiești, 2013, nr. pag. 131, ISBN 978-973-719-915-9, 2013;
- B12. Popa C.** - *Programarea calculatoarelor - Îndrumar de laborator*, Editura Universității Petrol-Gaze din Ploiești, 2008, nr. pag. 125, ISBN 978-973-719-242-4;
- B13. Popescu C., Popa C.,** - *Introducere în știința sistemelor și a calculatoarelor – Îndrumar de laborator*, Editura Universității Petrol - Gaze din Ploiești, 2006, ISBN 973-719-128-5.

C. Articole indexate ISI/BDI publicate

Articole ISI

- C1.** Popa C, Carbureanu M., Doicin B, *Application of machine learning techniques for modeling the reactor of the catalytic cracking process*, Conferința Internațională de Inginerie Integrată/International Conference on Integrated Engineering (CIE/C2I), Timisoara 2025.
- C2. Popa C,** Oprescu E.E. Popescu M., *Study of the influence of process parameters on biomass Gasification using UniSim Design Enviroment*, International Conference on Electronics, Computers and Artificial Intelligence (ECAI) IEEE, Ploiesti , 2022.
[Scopus - Document details - Study of the Influence of Process Parameters on Biomass Gasification using UniSim Design Environment | Signed in](#)
- C3.** Patrascioiu C., Popescu M, Paraschiv N, **Popa C. R.** *Academic education in Refinery advanced Process Control*, Proceeding Of the 30Th European Symposion on Computer Aided Process Engineering, ESCAPE 30, 24-27 May, 2020, Milano, Computer Aided Chemical Engineering, Vol. 48, 2020, pp. 2047-2052, <https://doi.org/10.1016/B978-0-12-823377-1.50342-6>

- C4. Popa C.,** Nicoleta N., Pătrășcioiu C., *Estimation of the Kinetic Parameters of a Catalytic Cracking Model. Case Study*, Revista de chimie, vol. 70, nr. 10, pp.3532-3537 ISSN 0034-7752, București, Romania, 2019; <https://doi.org/10.37358/RC.19.10.7591>
- C5. Dragomir R.,** Roșca P., **Popa C.,** *Five lump kinetic model for the catalytic cracking Process*, Revista de chimie, vol. 69, nr. 10, pp. 2633-2637, ISSN 0034-7752, București, Romania, 2018; <https://doi.org/10.37358/RC.18.10.6595>
- C6. Popa C.,** Popa A, *Improving FCC plant performance with Model Reference adaptive Control Based on Neural Network*, Proceeding of the International Conference on Electronic, Computers and Artificial Intelligence, Series: Electronics, Computers and Artificial Intelligence, vol. 8, nr. 3, ISSN 1843-2115, 2016;
- C7. Cangea O.,** Catalina C., **Popa C.,** Pantea O., Radu E., *Estimating the selectivity Coefficient of CI-ISE using Polynomial Regression*, Revista de chimie , vol. 67, nr. 8, pg.1613-1617, ISSN 0034-7752, 2016; <https://revistadechimie.ro/RCRevChimie.asp>
- C8. Popa C.,** Jacotă D., *Computational methods for reservoir characterization in studying the efficiency of the tertiary migration in abandoned oil reservoir*, 16th International Multidisciplinary Scientific GeoConference, Science Technologies in Geology, Exploration and Mining, Conference Proceeding, vol. III, pg. 777-785, 2016;
- C9. Pătrășcioiu C.,** **Popa C.,** *The performances estimation of the FCC plant using numerical treatment of the Castiglioni method. Cases study*, Revista de chimie, vol. 66, nr. 9, pg. 1490- 1494, ISSN 0034-7752, București, Romania, 2015; <https://revistadechimie.ro/RCRevChimie.asp>
- C10. Popa C.,** Pătrășcioiu C., Cangea O., *Performance Analysis of the Four Lump Kinetic Model of the Riser Catalytic Cracking*, Revista de Chimie, vol. 66, nr. 6, pg. 883-885, ISSN 0034-7752, București, Romania, 2015; <https://revistadechimie.ro/RCRevChimie.asp>
- C11. Popa C.,** Paraschiv N., *Efficient operation of reaction group from a catalytic cracking plant through fuzzy control*, Revista de Chimie, vol. 66, nr. 12, 2015, ISSN 0034-7752, pp.2136-2139. **IF:1,232**
https://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=8&SID=F2h5tXDBrAMYeDnYrm2&page=1&doc=1
- C12. Popa C.,** Paraschiv N., *Robustness Improvement in Operating the Reactor – Regenerator Group for the Catalytic Cracking Unit Using Advanced Automation*. Revista de chimie, vol. 66, nr. 5, pg.746-749, ISSN 0034-7752, București, Romania, 2015;

<https://revistadechimie.ro/RCRevChimie.asp>

- C13.** Oprescu E., Stepan E., **Popa C.**, Bolocan I., *Modeling the synthesis of an oxygenated biofuel additive*, 15th SGEM, Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, Section Renewable Energy Sources and Clean Technologies, vol. 4, pg. 337-344, 2015;
- C14.** Popescu C., Bucur G., **Popa C.**, *Controlling a vehicle air-cushion using radio waves with applications in water transport*, GeoConference on Nano, Bio and Green- Technologies for a Sustainable Future, Conference Proceedings, vol. 22, , Bulgaria, 2014, pg. 495-502, 2014;
- C15.** **Popa C.**, Cangea O., Bucur G., *Comparison between fuzzy logic control and PID control for the catalytic cracking process*, GeoConference Science and Technologies in Geology, Exploration and Mining, SGEM Conference Proceeding, vol. 1, ISBN 978-619-7105-07-0 / ISSN 1314-2704, Bulgaria, 2014, pg. 679-686, 2014;
- C16.** Cangea O, **Popa C.**, Moise A., *Software package development for mobile robot control and behavioral training*, GeoConference on Informatics, GeoInformatics and Remote Sensing, Conference Proceeding, vol. I, ISBN 978-619-7105-10-0 / ISSN 1314-2704, Bulgaria, 2014, pg.3 31-338, 2014;
- C17.** **Popa C.**, *Four – Lump Kinetic Model vs. Three - Lump Kinetic Model for the Fluid Catalytic Cracking Riser Reactor*, Book Series: PROCEA ENGINEERING vol. 100, 2015, pg. 602-608, 25th DAAAM International Symposium on Intelligent Manufacturing and Automation, 2014;
- C18.** **Popa C.**, *Application of Plantwide Control Strategy to the Catalytic Cracking Process*, Book Series: PROCEA ENGINEERING, vol. 69, 2014, pp. 1469-1474.
- C19.** **Popa C.**, *Neural Network Predictive Control System for the Catalytic Cracking Process*, Revista de chimie, vol. 64, nr. 12, pg. 1481-1485, ISSN 0034-7752, Bucuresti, Romania, 2013;
- C20.** **Popa C.**, *New Approach in Modelling, Simulation and hierarchical Control of Fluid Catalytic Cracking Process II- Hierarchical control*, Revista de chimie, vol. 64, nr. 10, , pp. 1167-1171, ISSN 0034-7752, București, Romania, 2013.
- C21.** **Popa C.**, Patrascioiu C., *Increase the catalytic cracking process efficiency by implementation an optimal control structure. Case study*, Conference 21st European Symposium on Computer Aided Process Engineering (ESCAPE 21),

Grecia, Book Series: Computer-aided Chemical Engineering, vol. 29, pp. 477-481, 2011.

- C22. Popa C.,** Pătrășcioiu C., *New Approach in Modeling, Simulation and Hierarchical Control of Fluid Catalytic Cracking Process. I- Process Modelling*, Revista de Chimie, vol.60, nr. 4, 2010, pp. 419- 426, ISSN 0034-7752, București, Romania.

Articole BDI

- C23.** Sîrbu E.E., Burdusel B.A.M, Calin C., Popa C., Tanase M. , *Prediction the solubility and swelling index of starch films applying machine learning methods*, International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management , SGEM 2025
- C24.** Doicin B, **Popa C.**, Carbureanu M., *Artificial neural network vs linear regression to modeling reactor of the catalytic cracking process*, International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management , SGEM 2024, Proceedings of 24th International Multidisciplinary Scientific GeoConference SGEM 2024, vol 24(2.1), page 27-34, DOI [10.5593/sgem2024/2.1/s07.04](https://doi.org/10.5593/sgem2024/2.1/s07.04)
- C25.** Popescu M.A , Sîrbu E. E, Călin C., Popa C., Enăscuță C.E, *Phosphate removal on biochar* International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM 2024, Proceedings of 24th International Multidisciplinary Scientific GeoConference Energy and Clean Technologies, SGEM 2024, vol 24 (4.1.), pg. 165-182, ISBN , 978-619760369-9, DOI [10.5593/sgem2024/4.1/s17.22](https://doi.org/10.5593/sgem2024/4.1/s17.22)
- C26.** Pătrășcioiu C., **Popa C.**, Popescu M., Achievements Regarding the Optimal Control of Refinery Processes, Proceedings - 2023 24th International Conference on Control Systems and Computer Science, CSCS 2023, pg. 16-21, 2023.
- C27.** Enăscuță C. E, Oprescu E.E, Călin, C., Vasilievici G., **Popa C.**, *Adsorption of nitrate on magnetic microalgal biochar*, International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management , SGEM 2022
- C28.** Oprescu E.E., Enăscuță C.E., Vasilievici G., Calib C., **Popa C.**, Lavric V., *Conversion of biomass under heterogeneous catalyst into levulinic esters*, International Multidisciplinary Scientific GeoConference Surveying Geology and

Mining Ecology Management, SGEM, Vol. 19, Issue 4.1, 2019, pg. 107-114, 19th International Multidisciplinary Scientific Geoconference, SGEM 2019, Albena; Bulgaria; [DOI: 10.5593/sgem2019/4.1/S17.014](https://doi.org/10.5593/sgem2019/4.1/S17.014)

- C29.** Popa C., Jacotă D., Marinoiu C., *Comparison between ordinary Kriging and ANN 's in predicting absolute permeability variations for reservoir description improvement*, 17th International Multidisciplinary Scientific Geoconference, Section Oil and Gas Exploration, pg. 83, 2017;
- C30.** Jacotă D., Marinoiu C., **Popa C.**, *Poprosity heterogenous distributions highlihgted with statistical and computational methods*, 17th International Multidisciplinary Scientific Geoconference, Section oil and gas Exploration, pg. 83-89, 2017;
- C31.** Oprescu E.E., **Popa Cristina**, *Prediction of FAME Yield Using Artificial Neural Nerwork Model*, Buletinul Universității Petrol- Gaze din Ploiești, Seria Tehnică, Vol. LXIX, nr. 1, pg. 13-18, 2017;
- C32.** **Popa Cristina**, *Intelligent Control Applied to the Cracking Catalytic Proces. Overview of Techniques*, Buletinul Universității Petrol- Gaze din Ploiești, Seria Tehnică, Vol. LXIX, nr. 1, pg. 63-68, 2017;
- C33.** Cangea O., **Popa C.**, Luana F., *Intelligent Computational Methods for Simulation and Analysis of Chemical Processes. Comparative review*, Buletinul Universității Petrol- Gaze din Ploiești, Seria Tehnică, vol. LXVII, nr. 2, ISSN 1224-8495, pg. 85-93, 2015.
- C34.** **Popa C.**, *Simulation of Conventional Control Structure of the Catalytic Cracking Process*, Buletinul Universității Petrol - Gaze din Ploiești, Seria Tehnică, vol. LXVI, nr. 3, ISSN 1224-8495, pg.69-74, 2014.
- C35.** Pătrășcioiu C., **Popa C.**, *System Identification. System Identification Toolboxor Propely Algoritms?*, *Advances in Automatic Control*, Proceeding of 16th International Conference on Automatic Control, Modelling &Simulation (ACMOS 14), ISBN: 978-960-474-383-4, Brașov, pg. 305 – 310, 2014.
- C36.** **Popa C.**, *The Supervision System of a FCC Plant*, Buletinul Universității Petrol-Gaze din Ploiești, Seria. Tehnică ,vol. LVX, nr. 3, ISSN 1224-8495, pg. 43-50, 2013;
- C37.** Popa A., **Popa C.**, *Control design of a pipe testing facility*, Buletinul Universității Petrol-Gaze din Ploiești, Seria. Tehnică,vol. LVX, nr. 3, ISSN 1224-8495, pg. 65-70, 2013.
- C38.** **Popa Cr.**, *Comparison of PI and MPC of Control of Catalytic Cracking Process*, , Seria. Tehnică, vol. LXII., nr. 4B, ISSN 1224-8495, pg. 95-100, 2010.

- C39. Popa C., Pătrășcioiu C.,** *The Model Predictive Control System for the Fluid Catalytic Cracking Unit*, Proceedings of 6th WSEAS International Conference on DYNAMICAL SYSTEMS and CONTROL (CONTROL '10), ISSN 1790-5117, ISBN 978-960-474-185-4, Kantaoui - Sousse, Tunisia, pg. 95-100, 2010.
- C40. Popa A., Teodoriu C., Popa C.,** *Analysis of the Nonlinearities in the Hydraulic Actuators*, Buletinul Universității Petrol - Gaze din Ploiești, Seria Tehnică, vol. LXI, nr. 3, ISSN 1224-8495, pg. 181-187, 2009.
- C41. Popa C., Paraschiv N., Pătrășcioiu C.,** *Modeling, Simulation and Hierarchical Control of the Fluid Catalytic Cracking*, Proceedings of the 17th International Conference on Control Systems and Computer Science, ISSN 2066-4451, Editura Politehnica Press, București, 2009.

Buletinul UPG

- C42. Jacota R. D., Popa C.,** Heterogeneous Distribution of Initial water saturation using artificial neuronal networks, Romanian Journal of Petroleum & Gas Technology, vol. Iv,(LXXV), no 2. 2023.pp 69-74, DOI: 10.51865/JPGT.2023.02.07
- C43. Popa C.,** An application for Selection and Sizing of Control Valve for Control Loop, Romanian Journal of Petroleum & gas Technology, vol Iv,(LXXV), no 2. 2023.pp 109-116, DOI: 10.51865/JPGT.2023.02.11.
- C44. Popa C.,** *Neural Network Model – Based Predictive Control System For Reactor of FCC*, Buletinul Universității Petrol - Gaze din Ploiești, Seria Tehnică, vol. LXI, nr. 3, ISSN 1224-8495, pp. 275-281, 2009.
- C45. Popa A., Holzmann H., Popa Cr.,** *ISO Pipe testing Process Analysis and Virtualization*, Buletinul Universității Petrol - Gaze din Ploiești, Seria Tehnică, vol. LX, nr. 3B, ISSN 1224-8495, pg. 49-55, 2008.
- C46. Popa C.,** *Multi-objective Optimization of an FCCU using Neuronal Network*, Buletinul Universității Petrol-Gaze din Ploiești, Technical Series, vol. LX, nr. 3 ISSN 1224-8495, pg. 81-87, 2008.
- C47. Pătrășcioiu C., Popa Cr.,** *Kinetic Model adaptation of Catalytic Cracking Unit*, Buletin Științific al Universității “Politehnica” din Timișoara, Seria Chimie și Ingineria Mediului, pp.35-38, Timișoara, vol. 52(66), nr 2, pg. 34, ISSN 1224-6018, 2007;

- C48. Popa C.,** Pătrășcioiu C., *The Adaptation of the Control Model for FCCU*, Buletinul Universității Petrol - Gaze din Ploiești, vol. LVIII, Seria Tehnică, nr. 1, ISSN 1224-8495, pg. 152-158, 2006.
- C49. Popa A., Popa Cr.,** *Centralized System for the Computer Inventory*, Buletinul Universității Petrol-Gaze din Ploiești, Seria Tehnică, vol. LVIII, nr. 1, ISSN 1224-8495, 2006, pg . 229-232.2006.
- C50. Popa C.,** Pătrășcioiu C., *Utilizarea mediului Cscape în programarea PLC-urilor*, Buletinul Universității Petrol-Gaze din Ploiești, vol. LVII, Seria Tehnică, nr. 2, 2005.
- C51. Popa C.,** *Analiza critică a conceptelor de reglare ierarhică a proceselor*, Buletinul Universității Petrol-Gaze din Ploiești, Seria Tehnică, vol. LVII, nr. 2, ISSN 1221-9371, pg. 128-133, 2005.
- C52. Pătrășcioiu C., Eftene (Popa)C.,** Rosca P., *The Models and Control Structures of Fluid Catalytic Cracking Process*, Buletinul Universității Petrol-Gaze Ploiești, Seria Tehnică, vol. LV, nr. 2, 2003.

D. Lucrări publicate în reviste și volume de conferințe cu referenți (neindexate)

- D1. Popa C.,** Cangea O., *Simulation Kinetic Model of Catalytic Cracking Process*, 1st International Colloquium Energy and Environmental Protection, Ploiesti, 2015.
- D2. Cangea O., Popa C.,** *Intelligent Computational Methods for Simulation and Analysis of Chemical Processes* , 1st International Colloquium Energy and Environmental Protection, Ploiesti, 2015.
- D3. Paraschiv N.,** Pătrășcioiu C., Mihalache S., Rădulescu G., Băieșu A., Popa C., Popescu M, Mihăiescu D., Olteanu M., *Conducerea automată a proceselor chimice , componenta a ingineriei chimice*, The XXXII-a Romanian Chemistry Conference , 2012.
- D4. Popa C.,** Paraschiv N., Pătrășcioiu C. *Reglarea ierarhică a procesului de cracare catalitică*, A XXXII-a Conferință Națională De Chimie Călimănești – Căciulata - octombrie 2012.
- D5. Mihăescu D., Popa C.,** Pătrășcioiu C., *Conducerea optimală a proceselor chimice. Studii de caz*, A XXXI-A Conferință Națională de Chimie, Secțiunea IV - Inginerie Chimică, Râmnicu Vâlcea, 6-8 octombrie 2010 .
- D6. AmuzaG.,** Matei G., Moraru E., Luca M., Drumeanu A., Răpeanu R., **Popa C.,** *Multifunctional Metal working fluids used Bearing Industry, Lubrification Managment and Technolgy*, The Jost Institute for Tribology, Spania, 2008.

- D7.** Matei G.M., Cira L., Amuza M.G., Luca M., Moraru E., Drumeanu A., Răpeanu R., **Popa C.**, *Formulation of high performance cutting oils using environmentally friendly raw materials*, Lubrification Management and Technology, The Jost Institute for Tribology, Spania, 2008.
- D8.** Matei G., Luca M., Cira L., Drumeanu A., Răpeanu R., **Popa Cr.**, Iliescu M. *Improved extreme pressure additives in metalworking fluids and their I above cutting tools durability influence*, *Proceedings of 10th International Conference Lubrication Engineering in Theory and Practice*, pp 26-34, Czech Mechanical Engineering Society, 2007.
- D9.** Popa C., **Patrascioiu C.**, *FCC Model Predictive Control*, Annals of the University of Petroșani, Electrical Engineering, UNIVERSITAS PUBLISHING HOUSE, ISSN 1454-8518, vol 9 (XXXVI), 2007.
- D10.** Popa C., **Patrascioiu C.**, *The Adaptation of the Control Model for FCCU*, Buletinul Universitatii Petrol-Gaze din Ploiesti, Vol. LVIII, Seria Tehnica, Nr. 1/2006.
- D11.** Popa C., **Patrascioiu C.**, *Utilizarea mediului Cscape in programarea PLC-urilor*, Buletinul Universitatii Petrol-Gaze din Ploiesti, vol. LVII, Seria Tehnica, Nr. 2, 2005
- D12.** **Patrascioiu C.**, Eftene C., *Modeling a Rieser – Type Reactor of Fluid Cracking Catalytic Unit*, *Proceedings of the 12th International Symposium on Modeling, Simulation and identification*, Septembre 24-25, Dunarea de Jos University of Galati, 2004.
- D13.** **Patrascioiu C.**, Eftene C., Rosca P., *The Models and Control Structures of Fluid Catalytic Cracking Process*, Buletinul Universitatii Petrol-Gaze Ploiesti, Vol. LV, Seria Tehnica nr. 2/2003

Data:

15.01.2026

Semnătura:

Conf . dr. ing. Popa Cristina Roxana