



PERSONAL INFORMATION

IDs in Research Indexing Services

Daniela-Maria Cristea

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WOS, Scopus, ACM Digital Library, Google Scholar, DBLP, ResearchGate

<https://www.webofscience.com/wos/author/record/HZL-2940-2023><https://www.scopus.com/authid/detail.uri?authorId=57209212099><https://scholar.google.com/citations?user=jx9x1tkAAAAJ&hl=ro><https://www.researchgate.net/profile/Daniela-Cristea>

My research interests include Artificial Intelligence and Software Engineering for addressing real-world problems. My PhD thesis aims to understand, design, and develop Machine learning/Deep learning algorithms to solve problems in Computational Intelligence, Data Analysis and medical image processing with applications in Bioinformatics and healthcare.

PROFESSIONAL EXPERIENCE

28.02.2022 - ongoing

Assistant Professor

[1 December 1918 University, Faculty of Informatics and Engineering, Alba Iulia, Romania](#)**Description:** Department of Informatics, Mathematics and Electronics**Responsibilities:** Mentoring students, evaluation through seminar materials, laboratory work, exams, projects, coordination of bachelor's thesis, activities within the academic community.

10.2016 - 02.2022

Associate faculty

[Babeş Bolyai University, Faculty of Mathematics and Computer Science, Cluj Napoca, Romania](#)**Description:** <https://www.cs.ubbcluj.ro/>**Responsibilities:** Improving student analytical skills through object-oriented and concurrent programming concepts, but also introducing Web technologies based on design templates. Evaluation of students through seminar materials, laboratory, exams, projects and coordination of Bachelor and Master theses.

10.2017 - 12.2017

Postgraduate program in partnership with [NTT DATA, Cluj Napoca, Romania](#)

11.2015 - 12.2016

Developer

[Company of Applied Informatics, Cluj Napoca, Romania](#)**Employees:** 20**Domain:** IT Software**Description:** Data Center**Responsibilities:** Analysis of requirements, objectives, project stage design and implementation of applications for websites, including E-commerce.

07.2015 - 10.2015

Junior Developer

[Ruby Tribe Company, Cluj Napoca, Romania](#)**Employees:** 50**Domain:** IT Software**Description:** Frontend internship and responsive web design

Projects: Dental Campus, Skin Vision

EDUCATION AND TRAINING

10.2023 - ongoing	George Emil Palade University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureş, Faculty of Sciences and Letters, Petru Maior, Târgu Mureş, Romania Specialization: Computer Science, PhD Candidate.
10.2016 - 09.2023	Babeş Bolyai University, Faculty of Mathematics and Computer Science, Cluj Napoca, Romania Specialization: Computer Science, PhD Candidate.
10.2011 - 06.2013	Babeş Bolyai University, Faculty of Mathematics and Computer Science, Cluj Napoca, Romania Specialization: Software Engineering, Master's degree.
10.2008 - 07.2011	“1 Decembrie 1918” of Alba Iulia University, Faculty of Science, Alba Iulia, Romania Specialization: Computer Science, Bachelor's degree.

PERSONAL COMPETENCES

Mother tongue	Romanian				
Foreign languages	UNDERSTANDING		SPEECH		WRITING
	Listening	Reading	Conversation	Oral speech	
English	C1	C2	C1	C1	C2
IAESTE Austria Certificate					
Digital competences	SELF ASSESSMENT				
	Information processing	Communicate	Content creation	Security	Problem solving
	experienced	experienced	experienced	independent	independent
Programming skills in: Python, .NET, Java and experience with Latex and Protégé editors. Master's degree Software Engineering, “Babeş Bolyai” University, Faculty of Mathematics and Computer Science, Cluj-Napoca, Romania. Bachelor's degree in Computer Science, Faculty of Science, “1 Decembrie 1918” University of Alba Iulia, Romania. High School Computer Science, Avram Iancu National College, Câmpeni, Alba County, Romania.					

Communication skills	Strong communication with students and teachers.
Organizational competencies	Good ability to analyze and work in multidisciplinary teams.
Skills acquired at work	Skills of persuasion and adaptation to new situations, seriousness, perseverance.

Driver's license	B Cat.
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INFORMATION

Other courses, trainings
(Courses, Conferences, Seminars, Affiliations, References)

- [1] **Member Organizer** at HACKATHON in4it (2025), Thematic: Digitalisation Future, “1 Decembrie 1918” of Alba Iulia, Alba Iulia, Romania.
- [2] **Member Organizer** at The 19th edition of the International Conference on Linguistic Resources and Tools for Natural Language Processing ConsILR-2024, "1 Decembrie 1918" University of Alba Iulia, Romania.
- [3] **Member Organizer** at HACKATHON in4it (2024), Thematic: Smart Government, Smart Living, Smart Mobility, Smart People, Smart Economy or Smart Environment, “1 Decembrie 1918” of Alba Iulia, Alba Iulia, Romania.
- [4] **Teaching Mobility International week (2024)**, University of Huelva, Faculty of Engineering, Spain.
- [5] **Workshop** on Emerging Technologies in Health Science (2023), Based on Artificial Intelligence and Related Fields and **International Conference** for PhD Candidates and Young Doctors, UMFST G.E. Palade, Târgu Mureş, Romania.
- [6] **Research Scholarship** (2020), Computer Science Master: Artificial Intelligence, Institute for System Software, Johannes Kepler University (JKU) of Linz, Austria.
- [7] **6th @RoBioinfo Seminar** (2019), Machine Learning for Bioinformatics, Babeş-Bolyai University, Cluj-Napoca, Romania.

Publications

- [1] **Cristea DM**, Sima I, Iantovics LB. Comparative analysis of optimized logistic regression with state-of-the-art models for complex gastroenterological image analysis. *Front Med (Lausanne)*. 2025 Nov 19;12:1655612. doi: 10.3389/fmed.2025.1655612. PMID: 41346992; PMCID: PMC12672889.
- [2] **Cristea, D.-M.**; Onita, D.; Iantovics, L.B. Biomimetic Transfer Learning-Based Complex Gastrointestinal Polyp Classification. *Biomimetics* **2025**, *10*, 699. <https://doi.org/10.3390/biomimetics10100699>
- [3] Sima, I., **Cristea, D.-M.**, Iantovics, L. B., & Niculescu, V. (2025). ACGA a Novel Biomimetic Hybrid Optimisation Algorithm Based on a HP Protein Visualizer: An Interpretable Web-Based Tool for 3D Protein Folding Based on the Hydrophobic-Polar Model. *Biomimetics*, *10*(11), 763. <https://doi.org/10.3390/biomimetics10110763>
- [4] Ioan Sima, **Daniela-Maria Cristea**, Elisabeta-Mihaela Ciortea, Laszlo Barna Iantovics, cRAMI 4.0 an Improved Reference Architectural Model for Industrie 4.0 (RAMI 4.0) based on a three-dimensional cubic lattice model, *Annales Mathematicae et Informaticae* **61** (2025), DOI: 10.33039/ami.2025.10.023, pp. 215-228
- [5] **Cristea, D.-M.**; Sima, I.; Sinitn, V.; Iantovics, L.-B. PraNet-based Gastrointestinal Polyp Segmentation on Heterogeneous Datasets: Study of Augmentation Impact on Performance. *Procedia Computer Science*, Volume 270, 2025, Pages 4155-4164, ISSN 1877-0509, <https://doi.org/10.1016/j.procs.2025.09.540>.
- [6] **Cristea, D.-M.**; Sinitn, V.; Iantovics, L.-B. Comparative Analysis of Fusion Network Models for Colorectal Polyp Segmentation on Heterogeneous Datasets. In Proceedings of the 32nd International Conference on Neural Information Processing (ICONIP 2025); *Lecture Notes in Computer Science (LNCS)*; Springer: Berlin/Heidelberg, Germany, Book: Neural Information Processing, Chapter No: 4, 16311, DOI:10.1007/978-95-4381-6_4
- [7] Emilia-Loredana Pop, Augusta Raiu, **Daniela-Maria Cristea**, Students' Evaluation in Databases and Web Programming, *ICT for Intelligent Systems Proceedings of ICTIS 2025*, Volume 13, Springer SIST. ISSN Number - 2190-3018.
- [8] **D.-M. Cristea**, Hybrid Combinatorial Problems Used for Multimodal Optimisation, *2024 IEEE 24th International Conference on Bioinformatics and Bioengineering (BIBE)*, Kragujevac, Serbia, 2024, pp. 1-8, doi: 10.1109/BIBE63649.2024.10820475.
- [9] Popescu Doru-Anastasiu, **Cristea Daniela-Maria**, and Bold Nicolae, (2023) A Transfer Learning Approach Interaction in an Academic Consortium. In *Advances in Web-Based Learning – ICWL 2023: 22nd International Conference, ICWL 2023*, Sydney, NSW, Australia, November 26–28, 2023, Proceedings. Springer-Verlag, Berlin, Heidelberg, 204–219. https://doi.org/10.1007/978-981-99-8385-8_16.
- [10] Doru Anastasiu Popescu, **Daniela-Maria Cristea** and Nicolae Bold, (2023), On an integrated assessment for the students within an academic consortium. *Augmented Intelligence and Intelligent Tutoring Systems (ITS)*, *Lecture Notes in Computer Science*, vol 13891. Springer, Cham. https://doi.org/10.1007/978-3-031-32883-1_46.
- [11] Ioan Sima and **Daniela-Maria Cristea**, (2021), Parallel Backtracking for the study of the Hydrophobic-Polar Model, *Proceedings of the IADIS International Conference Applied Computing*, 978-989-8704-34-4.
- [12] Sima I., **Cristea D.M.**, (2021), Record-to-Record Travel Algorithm for Biomolecules Structure Prediction, *Computational Science and Its Applications – ICCSA 2021. Lecture Notes in Computer Science*, vol 12949. Springer, Cham., https://doi.org/10.1007/978-3-030-86653-2_33.
- [13] **D.M. Cristea**, V.S. Ionescu, B.G. Trofin, (2020), Optimization of a Deep-Learning Method for Quantitative Structure-Activity Relationship (QSAR) Analysis, *IEEE Proceeding of the 22nd International Conference on Machine Learning and Applications. Conference (ICMLA)*, Conference Books: Copenhagen Denmark Jun 11-12, 2020, Part V, (pp. 132–137).
- [14] Telcian A, **Cristea D**, Sima I., (2020), Formal concept analysis for amino acids classification and visualization, *Acta Universitatis Sapientiae, Informatica*, DOI: <https://doi.org/10.2478/ausi-2020-0002>.
- [15] **D.M. Cristea**, Imre Zsigmond, I. Sima, B.G. Trofin, R. Kovács, (2019), Neural Network adaptability from 2D to 3D Chess, *IEEE 13th International Symposium on Applied Computational Intelligence and Informatics (SACI)*, 10.1109/SACI46893.2019.9111577.
- [16] **D.M. Cristea**, B.G. Trofin, (2019), A Historical Ontology of Semi-automatic Specification Extraction from Romanian Language, *In Proceedings of the 2019 2nd International Conference on Geoinformatics and Data Analysis (ICGDA)*. Association for Computing Machinery, New York, NY, USA, <https://doi.org/10.1145/3318236.3318246>.

Certifications Informal IT School, .NET Development Certificate, Cluj-Napoca, Romania.

Link Academy Group Education, Software Development Certificate, Timișoara, Romania.

Projects COST Action Project 02/10/2023-01/10/2027, Thematic: Problem modelling and user experience. Position: Researcher under coordination of Prof. Luca DI GASPERO.

Project "Actions to Develop Capacity for Scientific Research at the University 1 Decembrie 1918 of Alba Iulia", led by Director Cosmin Popa Gorjanu, is financed by Romania's Institutional Development Fund (FDI) for 2022-2023 through contracts CNFIS-FDI-2023-0268 and CNFIS-FDI-2022-0268. The project director's role is specified as an Expert in Research Seminars in Computer Science (COR 231006). Position: Member.

Awards

First prize at the 27th Summer School of Image Processing (2019), organized by the West University of Timisoara, Faculty of Mathematics and Computer Science, within the team project - *Detection of pneumothorax using data fusion in a convolutional neural network*.

Data: 19.12.2025

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