Curriculum Vitae

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EMPLOYMENT HISTORY

2021–	Professor, Department of Automation and Industrial Informatics, National University of Science and Technology "Politehnica" of Bucharest Head of Artificial Intelligence for SEnsing, Low-Power Networking and ICS SEcurity (AISENSE) Laboratory - PRECIS Research Institute
2020–	Founder and Research Scientist, Applied Research Solutions
2021–2024	ICT Consultant, TÜV Austria Romania
2017–2021	Associate Professor, Department of Automation and Industrial Informatics, University "Politehnica" of Bucharest Habilitation certificate (Dr.-Ing. habil.) in Automation and Industrial Informatics Thesis: *Information Processing in Distributed Sensor Systems*
2019	University Project Assistant (with Doctorate), Institute of Technical Informatics, Technical University of Graz, Austria. LEAD Project "Dependable Things in Adverse Environments"
2015–2016	Fulbright Visiting Scholar, EECS Department, School of Engineering, University of California, Merced, USA Topic: *Pervasive Building Energy Monitoring and Control over Reliable Wireless Sensor Networks* Faculty associate: Prof. Alberto Cerpa
2014–2015	Postdoctoral Researcher, Department of Automation and Industrial Informatics, University "Politehnica" of Bucharest Topic: *Aggregation and Data Fusion Strategies in Multi-sensory Intelligent Environments*, Project: "Development of Human Resources in Doctoral and Postdoctoral Research: Driving Force for a Knowledge-based Society" - KNOWLEDGE, POSDRU/159/1.5/S/134398. Adviser: Prof. Dan Popescu
2009–2017	Teaching Assistant and Assistant Professor (2013+), Department of Automation and Industrial Informatics, University "Politehnica" of Bucharest

EDUCATION

2012	Ph. D., University "Politehnica" of Bucharest, Faculty of Automatic Control and Computers, Systems Engineering (adviser: Prof. Dr. Ing. Valentin Sgârciu), Public defense date: 19.10.2012 Thesis: *Improving Life and Work with Reliable Wireless Sensor Networks*. Grade: *Magna cum laudae*
2011	PhD Research Internship, Distributed Embedded Systems Group, Institute of Computer Engineering - ITI, University of Lübeck, Germany, *Automating data collection and analysis from laboratory mice used in medical research through light-weight camera-enabled sensor networks and distributed computing (MiceNet)*, Adviser: Prof. Kay Römer
2011	M. Sc., University "Politehnica" of Bucharest, Faculty of Automatic Control and Computers, Automatic Control and Industrial Informatics
2009	ERASMUS Student, LaS3 Laboratory, University of Applied Sciences Regensburg, Germany, Diploma thesis: *Research on the influence of caching on task migration in multicore processors used in embedded automotive real-time systems*, Advisers: Prof. Jürgen Mottok (FH R), Prof. Dumitru Popescu (UPB)
2009	Dipl.-Eng. (5 year Engineering Studies, M.Sc. equivalent), University "Politehnica" of Bucharest, Faculty of Automatic Control and Computers, *top 2% – ranked 4th out of 259 graduates*

AWARDS

2024	Distinguished Lecturer of the IEEE Instrumentation and Measurement Society 2025-2027
2018	Best Paper Award, *Wireless Sensor Network Architecture based on Fog Computing*, CODIT 2018, Thessaloniki, Greece.
2013	1st Prize, NIDays 2013 Graphical System Design Conference, Bucharest, October 2013.
	Competitive Travel Grant, 2nd COST IntelliCIS Training School – Simulation-based Design of Complex Infrastructure Systems, RWTH Aachen, Germany.
2012	Competitive Travel Grant, Advanced School on ICT for Future Energy Systems (ICT4FES'12), Trento.
	Best Paper Award, SENSORCOMM 2012, Rome, Italy.
	Student Travel Grant, 9th European Wireless Sensor Networks Conference – EWSN 2012, Trento, Italy.
2011	"Are Hjørungnes" Student Travel Grant, IEEE Distributed Computing in Sensor Systems, Barcelona.

RESEARCH PROJECTS - PAST 5 YEARS

2024–2027	Researcher, *Novel current control for climate neutral energy infrastructure*, Horizon Europe Call CL5-2024-D2-01, GA 101192615. NOVETROL
2024–2026	Researcher, *Information Fusion of Multi-vector Real-Time Data Streams for Energy Management in Emerging Power Grids*, ERA-NET Enerdigit Call 2023. INFUSE
2024–2026	Researcher, *FIWARE Driven Energy Communities for the Future*, Clean Energy Transition (CET) Partnership, Joint Call 2022. ECOMM4FUTURE
2024	**Project partner responsible**, *Resource Efficient Manufacturing Model Development and Implementation*, GreenSME Open Call 1. Beneficiary: Asti Automation. REFFICIENT
2023	**Project responsible**, *Cognitive Robotic Cell through Embedded ML Vision*, StairwAI Open Call 3. Beneficiary: Asti Automation. COGNICELL
2022–2023	Researcher, *Bridging Carbon Neutral LNG with the Energy Market – A Novel Ontochain Application*, NGI ONTOCHAIN Open Call 3. Beneficiary: Applied Research Solutions. OTCnLNG
2021–2024	**Project partner responsible**, *rEsilient and seLf-healed EleCTRical pOwer Nanogrid*, Call: H2020-SU-DS-2020, Topic: U-DS04-2018-2020, Start Date: 01/10/2021, Duration: 36 months. Partner: TUV Austria Romania, $257075. ELECTRON
2021	**Project director**, *PROSIM Cyber-Physical Platform for Application Development and Training in the Process Industries*, HUBCAP Call #2 Experiment, Subgrant no. HUBCAP-OC2.1-2020/1499086, Beneficiary: Asti Automation, $65558. PRO-CPS
2021–2023	Researcher, *Extending the Measurement Concept for the Control of Emerging Power Systems – EMERGE*, UEFISCDI Exploratory Research Projects Call 2020, PN-III-P4-ID-PCE- 2020-2876. EMERGE
2020–2023	Researcher, *HALYomorpha halys IDentification: Innovative ICT tools for targeted monitoring and sustainable management of the brown marmorated stink bug and other pests – HALY.ID*, HORIZON 2020, ERA NET COFUND, CT-AGRI-FOOD, 2019 Joint Call, ID 40606. HALY.ID
2019	**Project director**, *Data-driven Modelling of Complex Manufacturing Systems – DAMS*, Joint Excellence in Science and Humanities (JESH), Austrian Academy of Sciences, $18200.
2018–2021	Researcher, *Intelligent and Distributed Control of Three Complex Autonomous Systems based on Emerging Technologies for Medical and Social Assistance and Precision Flexible Assembly Lines – CIDS-ACTECH*, UEFISCDI PCCDI Call 2017, Project No. 78.
2018–2020	Researcher, *Integrated System for Intelligent Monitoring based on UAV-WSN-IoT in Precision Agriculture – MUWI*, NETIO Framework Project for Internet of Things Innovation.

PUBLICATIONS

Over 150 publications: books/book chapters, articles in journals and conference proceedings, in the fields of wireless sensor networks, information processing and intelligent measurements. *See on-line researcher profiles for full list.*

P26.   Cretu G., Stamatescu I., **Stamatescu G.**, *Modeling and prediction of occupancy in buildings based on sensor data using deep learning methods*, IEEE Access, vol. 12, pp. 102994-103003, 2024.

P25.   M.D. Pavel, **Stamatescu G.**, *Flexible Manufacturing System for Enhanced Industry 4.0 and Industry 5.0 Applications*, 20th International Conference on Distributed Computing in Smart Systems and the Internet of Things (DCOSS-IoT), Abu Dhabi, United Arab Emirates, pp. 483-490, 2024.

P24.   Cretu G., Stamatescu I., **Stamatescu G.**, *Evaluation of Deep Learning and Machine Learning Algorithms for Building Occupancy Classification on Open Datasets*, 31st Mediterranean Conference on Control and Automation (MED 2023), Limassol, June 2023.

P23.   **Stamatescu G.**, Ciornei I., Plamanescu R., Albu M., *Detection of Anomalies in Power Profiles using Data Analytics*, 12th IEEE International Workshop on Applied Measurements for Power Systems (AMPS 2022), Cagliari, September 2022.

P22.   Fagaras R., Nichiforov C., Stamatescu I., **Stamatescu G.**, *Evaluation of Compressed Residential Energy Forecasting Models*, 2021 IEEE International Conference on Systems, Man, and Cybernetics (SMC 2021), Melbourne, October 2021.

P21.   **Stamatescu G.**, Chitu C., *Privacy-Preserving Sensing and Two-Stage Building Occupancy Prediction Using Random Forest Learning*, Journal of Sensors, vol. 2021, Article ID 8000595, 2021.

P20.   Nichiforov C., **Stamatescu G.**, Stamatescu I., Fagarasan I., *Learning Dominant Usage from Anomaly Patterns in Building Energy Traces*, 16th International Conference on Automation Science and Engineering (CASE), Hong Kong, August 2020.

P19.   Popescu D., Stoican F., **Stamatescu G.**, Ichim L., Dragana, C., *Advanced UAV–WSN System for Intelligent Monitoring in Precision Agriculture*, Sensors 2020, 20, 817.

P18.   **Stamatescu G.**, Entezari R., Römer K., Saukh O., *Deep and Efficient Impact Models for Edge Characterization and Control of Energy Events*, Proc. of the 25th IEEE International Conference on Parallel and Distributed Systems (ICPADS), Tianjin, China, December 2019.

P17.   Popescu D., Stoican F., **Stamatescu G.**, Chenaru O., Ichim L., *A Survey of Collaborative UAV–WSN Systems for Efficient Monitoring*, Sensors 2019, 19, 4690.

PROFESSIONAL ACTIVITIES

Service *selection*

- Lead Guest Editor: Special Issue on Complex Data Processing Systems and Computing Algorithms: New Concepts and Applications (DataPro), *Sensors (MDPI)*; Special Issue on Convergence of Intelligent Data Acquisition and Advanced Computing Systems (IDAACS2019), *Sensors (MDPI)*; Special Issue on Sensing and Data-Driven Control for Smart Building and Smart City Systems (SBSCS), *Journal of Sensors*. Guest Editor: Special Issue on Advanced Topics in Systems Safety and Security (IWSSS2019), *Information*; Special Issue on Energy Management for Smart Buildings (EM SB), *Energies*, Special Issue on Privacy-Preserving and System Security Control Based on Machine Learning (PPSSCML), *Applied Sciences*. Past associate editor: Journal of Sensors, IEEE ACCESS, Sensors.

- General co-chair, *9th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications* IDAACS 2017

- Organizing Committee Co-Chair, *International Workshop on Systems Safety & Security (IWSSS)*, 2013-2024.

- Special sessions: Advanced Methods and Applications for Increasing Control Systems Reliability, Safety and Security - IEEE SMC 2016, Intelligent Wireless Sensor Networks for Monitoring, Diagnosis and Control - IEEE CODIT 2017 and CODIT 2018, Control in Smart Cities - MED 2018, Intelligent data processing from sensors in control and decision support systems - MED 2021, Special Stream in Smart Buildings and Smart

Cities - IDAACS 2019/2021/2023, Workshop on Digitalisation of Manufacturing and Collaborative Robotics for Industry 5.0 - ETFA 2023.

- Reviewer for several relevant top journals such as IEEE Sensors, Elsevier Engineering Applications of Artificial Intelligence, Computers in Industry, Applied Energy, Sustainable Cities and Society. Member of multiple TPCs for international indexed conferences, most recently IEEE SECON, IEEE MASS, IEEE DCOSS-IOT.

- External expert/evaluator for the Ministry of Scientific Research and Innovation, Ministry of Energy, UEFIS-CDI, Malta Council for Science and Technology, Foundation for Polish Science, NSERC, RIF Cyprus, Science Fund of the Republic of Serbia (SFRS), EU–COST, DG-REGIO, EURAMET, European Commission Horizon Europe Program.

Memberships

2007–	Senior Member, Institute of Electrical and Electronics Engineers (IEEE) – IEEE Romania Section Secretary. Past-Chair of IEEE Romania Robotics and Automation Society Chapter. Chair of IEEE Romania Section Young Professionals (YP) Affinity Group 2017-2019. Member of IEEE RAS Technical Committee on Smart Buildings. Member of IEEE IES Technical Committee on Industrial Agents. Corresponding member of IEEE Region 8 Membership Development Committee.

2016–	Member, Association for Computing Machinery (ACM); Special Interest Group on Energy Systems and Informatics (SIGEnergy).

2017–	Member, IFAC TC3.3.Telematics: Control via Communication Networks.

Invited Talks *selection*

2024	*Complementary View on the NIS2 Directive and the Network Code on Cybersecurity: Technology-enabled Best Practices*, Critical Infrastructure Protection and Resilience Europe (CIPRE), Madrid, Spain, November 2024.

2024	*AI-Enhanced Cybersecurity for Energy: The ELECTRON Platform*, Big Data Week, Bucharest, Romania, October 2024.

2023	*European Regulatory and Policy Landscape for Cybersecurity of Energy Systems*, MED'23 Workshop on Cybersecurity for Electrical Power and Energy Systems (EPES), Limassol, Cyprus, June 2023.

2023	*Tutorial: Detection and Forecasting of Micro-Scale Variability in Electric Power Profiles*, 2023 IEEE International Instrumentation and Measurement Technology Conference (I2MTC 2023), Kuala Lumpur, Malaysia, May 2023. *with M. Albu*

2023	*Data Pre-processing and Automated Machine learning for Energy AI: An Overview*, 10th International Conference on Signal Processing and Integrated Networks (SPIN 2023), Amity University, India, March 2023.

2022	*Tutorial: Data Preprocessing Techniques for Multiscale Measurements Analytics*, 2022 IEEE International Instrumentation and Measurement Technology Conference (I2MTC 2022), Ottawa, Canada, May 2022. *with M. Albu*

2021	*Data Processing Methods based on Artificial Intelligence for Time Series*, 8th International Conference on Signal Processing and Integrated Networks (SPIN 2021), Amity University, India, August 2021.

2020	*ESENSE: Efficient distributed sensing and inference in heterogeneous IoT systems*, Networked Embedded Systems Workshop – Complexity Science Hub, February 10th, Vienna, Austria.

2019	*Deep Impact Models for Local Characterisation of Energy Events*, Department of Automation – Tsinghua University, December 6th, Beijing, China.

DEPARTMENT ACTIVITIES AND INSTITUTIONAL DEVELOPMENT

Advising students for project work, student scientific research competitions, bachelor and master thesis. Research activities in the field of automation and industrial informatics with a focus on intelligent data processing, distributed sensing and the industrial internet of things. Preparing scientific conference proceedings and journal articles, project reports and giving scientific talks. Reporting and administrative work. Social and educational outreach, industry collaboration and technology transfer.

2014–2015   Supervising faculty, Institutional development project co-financed with european funds, POSDRU 161 /2.1/G/134386, *From school, let's prepare ourselves for an active life*, enabling student career counseling and practical experience through specialised internships. SHIVA

2010–2017   Co-founder and Coordinator, *National Instruments LabVIEW Academy Program*, Faculty of Automatic Control and Computers, UPB, First implementation of the NI academic program in Romania.

2013–2017   Co-founder and member of the team, *Phoenix Contact EduNet International Education Network*, Faculty of Automatic Control and Computers, UPB, First implementation of EduNet in Romania.

2020–2024   Member of the Council of the Faculty of Automatic Control and Computers: committee for research, innovation and relation with the business environment and committee for international relations.

2024–2028   Member of the Romanian National Council for the Attestation of University Degrees, Diplomas and Certificates, Committee 15 on Computers, Information Technology and Systems Engineering.

2024–2029   Member of the Council of the Department of Automation and Industrial Informatics, UPB.

2021-2022   Engineer your Future! STEM educational outreach project for high-school seniors. Small Grants for Alumni Programs – Embassy of the United States of America in Romania. $15000

2020-2024   Project coordinator for Partner UPB, Erasmus+ Capacity Building Project *Master of Engineering in Internet of Things*, Coordinator: University of Siegen, Germany. IoTRAIN. $65608

2020-2024   Erasmus+ Cooperation Partnerships in Higher Education Project *Building Opportunities for SMEs Sustainable Entrepreneurship with Artificial Intelligence in Industry 5.0*, Partner: Asti Automation, Romania. BOOST-AI. $36735

TEACHING

2013–   Regelungstechnik I/II (Control Engineering 1/2), 3rd/4th year B.Sc., Faculty of Engineering in Foreign Languages.

2020–   Intelligent Measurement Systems, Master programme of Automation and Industrial Informatics, Faculty of Automatic Control and Computers

2023–   Computerprogrammierung und Programmiersprachen I/II (Computer Programming and Programming Languages 1/2), 1st year B.Sc., Faculty of Entrepreneurship, Business Engineering and Management

2024   Industrial Control Systems Cybersecurity, Master programme of Automation and Industrial Informatics, Faculty of Automatic Control and Computers

2024–   Artificial Intelligence, 4th year B.Sc., Faculty of Automatic Control and Computers

FOREIGN LANGUAGES

English (C2 – Common European Framework Level), Spanish (C2), German (C2), French (B2), Russian (A2).

OTHER INFORMATION

Programming languages: Python, Julia, MATLAB

Certificates: Cambridge Certificate in Advanced English, Diploma Basico de Espanol, Goethe Zertifikat C1, Didactic Training Certificate UPB, Certified Trainer Certificate, Project Management Certificate, Stanford Online Statistical Learning Statement of accomplishment (with distinction), Coursera Machine Learning, Coursera Deep Learning specialisation, including: Neural Networks and Deep Learning, Structuring Machine Learning Projects, Improving Deep Neural Networks, Convolutional Neural Networks, Sequence Models.