

Curriculum Vitae

Grigore S. Stamatescu

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Department of Automation and Industrial Informatics

Faculty of Automatic Control and Computers

National University of Science and Technology "Politehnica" of Bucharest
313 Splaiul Independenței, PRECIS 406, 060042 Bucharest, Romania

PHONE: +40 (0) 723425323

EMAIL: grigore.stamatescu@upb.ro

[LinkedIN](#) / [Google Scholar](#) / [ORCID](#)

[Homepage](#)

EMPLOYMENT HISTORY

- 2021– Professor, Department of Automation and Industrial Informatics,
National University of Science and Technology "Politehnica" of Bucharest
- 2020– Founder and Research Scientist, [Applied Research Solutions](#)
- 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"
- 2013–2017 Assistant Professor, Department of Automation and Industrial Informatics,
University "Politehnica" of Bucharest
- 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
- 2009–2013 Teaching and Research Assistant, 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 Sgârțiu), 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 com-
puting (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*
- 2004 Baccalaureate, Miguel de Cervantes High School, Bucharest, Mathematics-Informatics profile, bilin-
gual Spanish

AWARDS

- 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 IntellCIS 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

- 2024–2026 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.
- 2017–2020 Researcher, *Integrated Multi-Agent Aerial Robotic System for Exploring Terrestrial Regions of Interest – MAARS*, Romanian Space Agency STAR Program C3-2015.

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.*

- P10. 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.
- P9. **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.
- P8. 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.
- P7. **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.
- P6. 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.
- P5. Popescu D., Stoican F., **Stamatescu G.**, Ichim L., Dragana, C., *Advanced UAV-WSN System for Intelligent Monitoring in Precision Agriculture*, Sensors 2020, 20, 817.
- P4. **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.
- P3. **Stamatescu G.**, Stamatescu I., Arghira N., Fagarasan I., *Data-Driven Modelling of Smart Building Ventilation Subsystem*, Journal of Sensors, vol. 2019, Article ID 3572019, 2019.
- P2. Popescu D., Stoican F., **Stamatescu G.**, Chenaru O., Ichim L., *A Survey of Collaborative UAV-WSN Systems for Efficient Monitoring*, Sensors 2019, 19, 4690.
- P1. Fagarasan I., Iliescu S. S., **Stamatescu G.**, Dumitru I., Arghira N., *Intelligent Simulator for Industrial Processes*, Request A 2009 00756/24.09.2009, Published 30.06.2011//6/2011, RO126447-A2, Awarded Patent no. 126447B1 from 31.10.2018, State Office for Inventions and Brands OSIM.

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*. 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)*, 2013-2023.
- 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 DCSS-IOT.
- External expert/evaluator for the Ministry of Scientific Research and Innovation, UEFISCDI, Malta Council for Science and Technology, Foundation for Polish Science, NSERC, RIF Cyprus, EU-COST, DG-REGIO, 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

- 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.
- 2019 *Time series modelling for prediction and anomaly detection of energy consumption in large commercial buildings*, Automation and Information Systems Scientific Seminar – Faculty of Automatic Control and Computers, November 22nd, Bucharest, Romania.
- 2019 *Data-driven Modelling of Complex Manufacturing Systems*, Institute of Technical Informatics, Technical University of Graz, March 4th, Graz, Austria.

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.

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

TEACHING

- 2013–2024 Information Processing, 1st year B.Sc., Faculty of Automatic Control and Computers.
- 2013– Regelungstechnik (Control Engineering), 3rd year B.Sc., Faculty of Engineering in Foreign Languages.
- 2014– Regelungstechnik II (Control Engineering 2), 4rd 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

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](#).