Curriculum Vitae

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EMPLOYMENT HISTORY

2017– Associate Professor, Department of Automatic Control and Industrial Informatics, University "Politehnica" of Bucharest
Habilitation certificate (Dr.-Ing. habil.) for advising PhD students in Automatic Control and Industrial Informatics – Systems Engineering domain
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 Automatic Control 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 Automatic Control 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 Automatic Control 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, Project: *Automating data collection and analysis from laboratory mice used in medical research through light-weight camera-enabled sensor networks and distributed computing (MiceNet)*, advisers Prof. Kay Römer (UzL), Prof. Valentin Sgârciu (UPB)

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, bilingual 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 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 – DCOSS 2011, Barcelona, Spain.

RESEARCH PROJECTS - PAST 5 YEARS

2021 **Project director**, *PROSIM Cyber-Physical Platform for Application Development and Training in the Process Industries*, HUBCAP Call #2 Experiment, H2020 Digital Innovation HUBs and Collaborative Platform for Cyberphysical Systems IA No. 872698, 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.

2017 **Project director**, *Multi-protocol gateway for open automation in smart buildings – OPENBMS*, UEFISCDI Innovation Cheques, 73CI/2017, $12820. OPENBMS

2016–2017 **Project director**, *New Dynamic Consensus Algorithms for Thermal Energy Management in Buildings – CONSENSYS*, UPB Excellence Grants, Project no. 221, $4,750. CONSENSYS

2016–2018 Researcher, *Energy Efficient Automation and Telemetry System for Resource Management in Precision Agriculture – SA-TERRA*, UEFISCDI Bridge Grant Call June 2016, Project no. BG-2016-0387.

2016–2018 Researcher, *Multi-UAV System for Flood Damage Assessment – SIMUL*, UEFISCDI Bridge Grant Call June 2016, Project no. PN-III-P2-2.1-BG-2016-0318.

2016–2018 Researcher, *Advanced Process Control System for Intelligent Specialization in the Energy Field – ASID*, UEFISCDI Bridge Grant Call June 2016, Project no. PN-III-P2-2.1-BG-2016-0234.

2013–2016 Researcher, *Multisensory Robotic System for Aerial Monitoring of Critical Infrastructure Systems – MUROS*, Romanian Space Agency STAR Program C2-2013, Project ID 393. MUROS

INDUSTRY PROJECTS

2018 *Predictive Modelling and Machine Learning Pipeline Design for AdTech*, aeon.Click.

2017 *Curriculum development and training delivery for the training courses: Data Science for Business, Data Insights (Technical course)*, RINF Outsourcing Solutions.

2016 *Machine learning for reliability and quality engineering*, Design and implementation of a big data analytics and predictive maintenance methodology for improving automotive production, RINF TECH.

2016 *Data analytics platform for cultural heritage*, Survey and technical report on big data analytics and visualization for user engagement modelling in museums, RINF TECH.

2015 *Autonomous naval system* and *Autonomous aerial system*, Industrial research and development activities, Teamnet International.

2014 – 2015 *Indoor localizer - Proof of Concept 1 and 2*, Algorithm development and evaluation for radio-based indoor localization - protoyping and evaluation of localization algorithm implemented in MATLAB. Algorithm enhancement and evaluation for radio-based indoor localization. RINF TECH

PUBLICATIONS

Over 130 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.*

Selected Publications relevant to Current Research Activity

P10. 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.

P9. Popescu D., Stoican F., **Stamatescu G.**, Ichim L., Dragana, C., *Advanced UAV–WSN System for Intelligent Monitoring in Precision Agriculture*, Sensors 2020, 20, 817.

P8. **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.

P7. **Stamatescu G.**, Dragana C., Stamatescu I., Ichim L., Popescu D., *IoT-Enabled Distributed Data Processing for Precision Agriculture*, Proc. of the 27th Mediterranean Conference on Control and Automation (MED), Akko, Israel, July 2019.

P6. **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.

P5. Popescu D., Stoican F., **Stamatescu G.**, Chenaru O., Ichim L., *A Survey of Collaborative UAV–WSN Systems for Efficient Monitoring*, Sensors 2019, 19, 4690.

P4. 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.

P3. Popescu D., Dragana C., Stoican F., Ichim L., **Stamatescu G.**, *A Collaborative UAV-WSN Network for Monitoring Large Areas*, Sensors 2018, 18, 4202.

P2. **Stamatescu G.**, Stamatescu I., Popescu D., *Consensus-based Data Aggregation for Wireless Sensor Networks*, Journal Control Engineering and Applied Informatics, Vol. 19, No. 2, pp. 43–50, 2017.

P1. Stamatescu I., Arghira N., Fagarasan I., **Stamatescu G.**, Iliescu S.St., Calofir V., *Decision Support System for a Low Voltage Renewable Energy System*, Energies, Vol. 10, No. 1, pp. 118–128, 2017.

PROFESSIONAL ACTIVITIES

Service *selection*

- Co-Editor-in-Chief, *International Journal of Computing*, ISSN 2312-5381 IJC
- Lead Guest Editor, Special Issue on Convergence of Intelligent Data Acquisition and Advanced Computing Systems (IDAACS2019), *Sensors (MDPI)*

- Guest Editor, Special Issue on Advanced Topics in Systems Safety and Security (IWSSS2019), *Information*
- Lead Guest Editor, Special Issue on Sensing and Data-Driven Control for Smart Building and Smart City Systems (SBSCS), *Journal of Sensors*
- Editor: *Journal of Sensors*, ISSN: 1687-7268 (Online), DOI: 10.1155/9161, *Smart Cities*, ISSN 2624-6511, *Automation*, ISSN 2673-4052, *Sensors (MDPI)*, ISSN 1424-8220, IEEE Access
- 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)*, 2013-2020.
- 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.
- Reviewer for several relevant top journals such as IEEE Sensors, Elsevier Engineering Applications of Artificial Intelligence, Computers in Industry, Applied Energy, and IEEE conferences such as MED, ICCA, SMC, ICSTCC. Member of multiple TPCs for international indexed conferences.
- External expert/evaluator for the Ministry of Scientific Research and Innovation, UEFISCDI, Malta Council for Science and Technology, Foundation for Polish Science, EU–COST, DG-REGIO.

Memberships

2007– Senior Member, Institute of Electrical and Electronics Engineers (IEEE) – IEEE Romania Section Secretary. 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.

2016– Member, Association for Computing Machinery (ACM)

2011– Member, Romanian Society of Automatic Control and Technical Informatics (SRAIT)

2020– Member, Romanian Society of Robotics (SRR)

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

Invited Talks

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 Large Scale Manufacturing Systems*, Complexity Science Hub, March 8th, Vienna, Austria.

2019 *Data-driven Modelling of Complex Manufacturing Systems*, Institute of Technical Informatics, Technical University of Graz, March 4th, Graz, Austria.

2016 *Modeling and Predictive Control for Thermal Energy Management in Smart Buildings*, Cyber-Physical Systems and Advanced Control Seminar, SRAIT-Faculty of Automatic Control and Computers, June 16th, Bucharest, Romania.

2016 *Wireless Sensor Networks for Building Energy Management*, Fulbright Outreach Lecturing Fund (OLF), International Technological University, February 2nd, San Jose/CA, USA.

2015 *The LabVIEW Academy Program: Effective Academia-Industry Collaboration*, National Instruments NIWeek 2015, August 3rd, Austin/TX, USA.

DEPARTAMENT ACTIVITIES AND INSTITUTIONAL DEVELOPMENT

Advising students for project work, student scientific research competitions, bachelor and master thesis. Research activities in the field of automatic control and industrial informatics with a focus on intelligent measurement technologies and transducers. Preparing scientific conference proceedings and journal articles, project reports and giving scientific talks. Reporting and administrative work.

2010–2013 Long-term expert, Institutional development project co-financed with european funds, POSDRU 86/1.2/S/63806, *National Network of Research Centers for the Development of Study Curricula with Flexible Routes and Didactic Instruments for Bachelor and Master Studies in the Field Systems Engineering*.

2012–2013 Supervising faculty, Institutional development project co-financed with european funds, POSDRU 109/2.1/G/82454, *I want to practice to become a sought-after engineer*, enabling student practical experience through internships in companies from the field of automatic control and industrial informatics.

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 internships in companies from the field of automatic control and industrial informatics. 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– 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.

2020-2023 Project coordinator for Partner UPB, Erasmus+ Capacity Building Project *Master of Engineering in Internet of Things*, Coordinator: University of Siegen, Germany. IoTRAIN

TEACHING

2009– Regelungstechnik (Control Engineering), Seminar/Laboratory, 3rd year B.Sc., Faculty of Engineering in Foreign Languages, German Department.

2009– Information Processing, Laboratory, 1st year B.Sc., Faculty of Automatic Control and Computers.

2016– Sensoren und Aktuatoren (Sensors and Actuators), Laboratory, 2nd year B.Sc., Faculty of Engineering in Foreign Languages, German Department.

2008–2017 Transducer and Measurement Systems, 3rd year B.Sc., Faculty of Automatic Control and Computers.

COURSES TAUGHT

Fall 2013– Regelungstechnik, 3rd year B.Sc., Faculty of Engineering in Foreign Languages.

Fall 2013– Information Processing, 1st year B.Sc., Faculty of Automatic Control and Computers.

Fall 2014– Regelungstechnik II, 4rd year B.Sc., Faculty of Engineering in Foreign Languages.

Fall 2020– Intelligent Measurement Systems, Master programme of Automation and Industrial Informatics, 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: MATLAB, R, LabVIEW, C/C++, Python, Julia
Tools: RapidMiner, SAS Enterprise Miner, Weka, Alteryx Designer, Tableau
Certificates: Cambridge Certificate in Advanced English, Diploma Basico de Espanol, Goethe Zertifikat C1, Didactic Training Certificate UPB, Certified Trainer Certificate, Project Management Certificate, NI Certified LabVIEW Associate Developer, 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, Certified RapidMiner Analyst.