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Educational Background

Ph.D. in Automation, The University of Metz, (Lorraine University), France.

M.S. in Science and Technologies, The University of Metz, (Lorraine University), France.

Paul Verlaine University of Metz, Mechanical Engineering and Computer-Integrated Manufacturing, France.

B.S. in Control Systems and Computer Science, The University of Transilvania of Brasov, Romania.

Academic Positions

Assistant Professor (Senior Lecturer), Department of Electronics and Computers, Faculty of Computer Science and Electrical Engineering, Transilvania University of Brasov, Romania.

Assistant Teaching Professor, Part-Time Lecturer, Electrical and Computer Engineering Department, Northeastern University, Boston, USA.

Associate Researcher and Instructor, Department of Mechanical, Industrial and Manufacturing Engineering, Oregon State University, USA.

Invited Guest Professor, Department of Design Manufacturing Control, Ecole Nationale d'Ingenieurs de Metz, France.

Graduate Teaching Associate, Electrical and Computer Engineering Department, University of Texas at Arlington, Texas, USA.

Selected Honors, Recognitions and Outstanding Achievements

ERASMUS Mobility at Lorraine University, France, 2024.

Dr. Kanako Miura Award of IEEE International Conference on Humanoid Robotics, Spain.

Fellowship at University of Texas at Arlington, STEM Fellowship for Robotic Skin Development, USA.

Research Scholarship for RFID Tags Development, Regional Council of Lorrain, France.

Socrates-Erasmus Scholarship, Mechanical Engineering and Computer Integrated Manufacturing, The University of Metz, France.

Selected Publications and Books

Journals

I.C. Bogdan, G. Abba, Friction modelling and parameter estimation for heavy-duty robots, Transactions of the Institute of Measurements and Control, (accepted for publication), 2024.

I.C. Bogdan, E. Simion, Improving Facial expressions using Games Theory: Application to Hanson Android, Polytechnic University of Bucharest, Scientific Bulletin, Series C, Vol. 85, Iss. 1, ISSN 2286-3540, 2023.

I.C. Bogdan, T. Tarumi, D. Popa, A study of mathematical models used in the cerebral hemodynamics circulation, Polytechnic University of Bucharest, Scientific Bulletin, Series C, Vol. 85, Iss. 3, ISSN 2286-3540, 2023.

J. He, Y. Xiao, **I.C. Bogdan**, S. Nazarian, P. Bogdan, Design Methodology for Energy Efficient Unmanned Aerial Vehicles, (Journal Paper), Transactions on Design Automation of Electronic Systems, Vol. 27, Issue 1, no. 4, pages 1-20, 2022.

J. He, Y. Xiao, P. Bogdan, **C. Bogdan**: Design Methodology for Energy Efficient Unmanned Aerial Vehicles. CoRR abs/1909.11238 (2019).

Conferences

R.Neculai, **I.C. Bogdan**, M. Alexandru, D.N. Robu, Access Management in IoT: Implementing a Secure Access Control System, The 15th International Conference on Communications, Romania, 2024.

I.C. Bogdan, H. A. Modran, S.M. Bibic, E. Simion, The Future of Social Robots in Education, Healthcare and Engineering, 2024 International Conference on Interactive Computer Aided Learning, Estonia, 2024.

H. Modran, **I.C. Bogdan**, D. Ursutiu, C. Samoila, LLM Intelligent Chatbot Tutoring using a RAG Approach for Higher Education Courses, 2024 International Conference on Interactive Computer Aided Learning, Estonia, 2024.

D.T. Ionita, **I.C. Bogdan**, H. Modran, A. Dinu, Education and Mental Health through AI Virtual Assistants, 2024 International Conference on Interactive Computer Aided Learning, Estonia, 2024.

C. Badea, A. Costea, A. Halmaghi, A. Hancu, **I. C. Bogdan**, H. A Modran, Integrating AI and UAV/Drones Technologies for Enhanced and/or Workplace Safety, 2024 International Conference on Interactive Computer Aided Learning, 2024.

D. Ursutiu, C. Samoila, H. A. Modran, **I.C. Bogdan**, I. Dumitru, PAST and PRESENT - LabVIEW in Knowledge and Education, 2024 International Conference on Interactive Computer Aided Learning, Estonia, 2024.

A.S. Jecu, A.G. Demeter, **I.C. Bogdan**, **I.C.**, Face-Tracking mount display for Medical and Engineering Applications, 2023 The 17 International Conference on Modern Electric Systems (EMES), Oradea, Romania, DOI: 10.1109/EMES58375.2023.10171630, 2023.

A. Habib, S. Das, **I.C. Bogdan**, D. Hanson, and D. Popa, Learning Human-like Facial Expressions for the Android, Phillip K. Dick, International Conference on Automation Science and Engineering, Taiwan, 2014, DOI: 10.1109/CoASE.2014.6899473.

A. Habib, S. Das, **I.C. Bogdan**, D. Hanson, and D. Popa, Learning Human-like Facial Expressions for the Android Phillip K. Dick, IEEE International Conference on Robotics and Automation ICRA 2014 Workshop Hong Kong, China.

I.C. Bogdan, and G. Abba, Identification of mechanical parameters at low velocities for a micro-positioning stage using a Velocity Hysteresis Model, 2012 IEEE International Conference on Robotics and Automation (ICRA), St. Paul, Minnesota, USA, pages 430 - 435, DOI: 10.1109/ICRA.2012.6224720.

I.C. Bogdan, and G. Abba, Phenomenological modeling and identification of micro-positioning systems (French), Proceedings of the 2010 IEEE Francophone International Conference of Automation (CIFA), Nancy, France.

I.C. Bogdan, and G. Abba, Identification of the servomechanism used for micro displacement, Proceedings of the 2009 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), St. Louis, Missouri, USA, pages 1986 - 1991, DOI: 10.1109/IROS.2009.5354592.

Books

H. Modran, **I.C. Bogdan**, D. Ursutiu and C. Samoila, Introducere in Programare Grafica LabVIEW si Aplicatii in Electronica, Telecomunicatii si Tehnologii Informationale, ISSN: 978-606-19-1709-9, 2024.

F. Sandu, **I.C. Bogdan**, Semnale si Sisteme – Analiza si Sinteza Circuitelor Electronice, Editura Universitatii Transilvania, Brasov, 2023 – ISBN: 978-606-19-1671-9.

I.C. Bogdan, Signals and Systems – From theory to practice, MatrixRom, ISBN: 978-606-25-0630-8, 2021.

Doctoral Thesis Title

I.C. Bogdan, Modélisation et commande de systèmes linéaires de micro-positionnement : application à la production de micro-composants électroniques, Université Paul Verlaine de Metz (Université Lorraine), Metz, France, 2010.

Other Conferences

D.T. Ionita, **I.C. Bogdan**, H.A. Modran, Innovative Approaches in Education with AI-Powered Virtual Assistants, (ISIM & ISWIM 2024, Book of Abstracts).

M.-G. Gheorghiu, I.-C. Turculeț, E.-C. Georgescu, R.-M. Oriță, S.M. Bibic, **I.-C. Bogdan**, Integrity Insight AI: Authenticity Detection Application based on Facial Movements Using Artificial Intelligence, (ISIM & ISWIM 2024, Book of Abstracts).

M.-G. Gheorghiu, I.-C. Turculeț, E.-C. Georgescu, R.-M. Oriță, S.M. Bibic, **I.-C. Bogdan**, INDOORPATH: Interactive map that improves accessibility and efficiency of any building, (ISIM & ISWIM 2024, Book of Abstracts).

I.C. Bogdan, F.P. Velicea, Biological barcodes for engineering and medical applications, (ISIM & ISWIM 2023, Book of Abstracts, ISSN-L 2821 – 8779, volume 2).

A.S. Jecu, A.G. Demeter, **I.C. Bogdan**, Vital parameters monitoring using a portable device, (ISIM & ISWIM 2023, Book of Abstracts, ISSN-L 2821 – 8779, volume 2).

I.C. Bogdan, T. Takashi, D. Popa, A study of mathematical models used in the the cerebral hemodynamics circulation, (ISIM & ISWIM 2022, Book of Abstracts, ISSN 2821 – 8779, volume 1).

I.C. Bogdan and E. Simion, Improving Facial expressions using Games Theory: Application to Hanson Android, (ISIM & ISWIM 2022, ISSN 2821 – 8779, volume 1).

Journal/Article Reviews

Bulletin of the Transilvania University of Brasov, 2024.

ACM Transactions on Computing for Healthcare, 2023/2024.

IEEE Robotics and Automation Letters, 2023.

Frontiers in Robotics and AI, 2017, 2023.

IMA Journal of Mathematics Control and Information, 2014/2017.

IEEE Design and Test, 2015/2023.

IEEE Automation Science and Engineering, 2013/2014.

Information Technology Research Journal, 2011.

Conference Reviews

IEEE International Conference on Interactive Computer Aided Learning, 2024.

IEEE International Conference on Electronics, Computers and Artificial Intelligence (ECAI) 2024.

IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM), 2023.

IEEE Control Systems Society Conference Management System, 2015/2016.

IEEE International Conference on Robotics and Automation, 2014/2015.

American Conference on Control, 2015.

IEEE International Conference on Automations Science and Engineering, 2014.

IEEE International Conference on Decision and Control 2011/2012/2013.

IEEE International Conference on Intelligent Robots and Systems 2013/2014.

IEEE International Conference on Optimization of Electrical and Electronic Equipment, 2012.

Taught Courses

- Embedded Design Systems Enabling Robotics (EECE 2160).
- Fundamentals of Linear Systems and Signals (EECE 2520), course under ABET evaluation.
- Classical Control Systems (EECE 5580).
- Classical Control Systems (EECE 5581 labs).
- Special Topic on Feedback Control of UAVs (EECE 5698).
- Signals and Systems (Course, Labs and Seminars, ECE RO).
- Signal Processing (MATLAB Labs and Seminars, ECE RO).
- C++/POO Programming (Labs, ECE RO).
- Industrial Communications (Course and Project, ECE RO).
- Logic Programming and Functional Programming (Java Script Labs, ECE RO).
- Data Transmission and Computers Network (CISCO Labs, ECE RO).
- Applied Informatics (Course, Labs and Projects, ECE RO).
- Data acquisition systems, Interfaces and Virtual Devices, (Course and Projects, ECE RO).

Course Development

- Advanced Digital Processing for Mechatronics Systems, OSU, 2021 – 2022.
- Fundamentals of Linear Systems and Signals (EECE 2520), course under ABET evaluation, ECE Department, NEU, 2018-2021).
- Data acquisition systems, Interfaces and Virtual Devices, (Course and Projects, ECE RO, 2021)
- Operating Systems (Developed part of the course for the English Engineering Section ECE RO, 2020).
- Cloud Computing (Distributed Architectures and Web Services), (ECE RO, 2023).