PERSONAL INFORMATION

Ioan ȘERBAN

Work address: 1 Politehnicii, 500024, Brasov, Romania

ioan.serban@unitbv.ro

POSITION

Professor

WORK EXPERIENCE

Oct. 2019 – present
Oct. 2014 – Sept. 2019
March 2009 - Sept. 2014

Professor (Habilitated)
Associate Professor
Lecturer

Transilvania University of Brasov, www.unitbv.ro

- Teaching: Power Electronics; Microgrids and distributed generation systems, Energy Sources, Matlab/Scilab programming;
- Research: power electronic converters for grid and microgrid integration of renewable energy sources and energy storage systems.

Business or sector Academic

EDUCATION AND TRAINING

2010 - 2013

Post-doctoral researcher

Transilvania University of Brasov

- Research theme: Frequency control in microgrids with renewable energy sources;

2004 - 2008

PhD in Electrical Engineering

Transilvania University of Brasov

- Hybrid power systems with renewable energy sources;
- Modelling and control of renewable energy generators;
- Power electronics converters for renewable energy sources.

1999 - 2004

MsC in Electrical Engineering

Transilvania University of Brasov

- Electrical engineering, automation, power electronics, electrical machines.

2007 - 2011

Trainings

- 2011 – Aalborg University, 4-month internship within the post-doctoral research programme;
- 2009 – National Technical University of Athens, short study visit about microgrids and renewable energy sources;
- 2008 – Aalborg University, 2-month study visit with the research topic „Holistic Modelling of Integrated Power Systems connected to the Grid”;
- 2007 – Aalborg University, attending the course “Power Electronics for Renewable Energy System”;

PERSONAL SKILLS

Mother tongue Romanian

Other language(s)

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
English B2	B2	B2	B2	B2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- Good communication skills gained through my experience as a teacher, as a team leader in research projects, and as a participant with oral presentations at international conference.

Organisational / managerial skills

- Abilities to organize activities within a team, acquired in research projects.

Job-related skills

- Expertise in power electronics systems, electrical generators for renewable energy sources, digital control systems for power electronics, thermal management of power converters;
- Highly experienced in modelling and analysis of power electronics in Matlab/Simulink and PLECS;
- Deep knowledge of rapid control prototyping (RCP) for power electronics converters (experienced with dSPACE control platforms);
- Experience in developing real-time simulations, hardware in the loop (HIL), as well as power-HIL systems.
- Excellent laboratory practical abilities;

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
INDEPENDENT USER	INDEPENDENT USER	INDEPENDENT USER	INDEPENDENT USER	INDEPENDENT USER

Levels: Basic user - Independent user - Proficient user
Digital competences - Self-assessment grid

Other computer skills:

- good command of office suite (word processor, spread sheet, presentation software, drawing software) and Latex
- good command of Matlab, Scilab, PLECS, Python, LTSPice.

ADDITIONAL INFORMATION

Scientific papers

- ORCID: http://orcid.org/0000-0002-8515-6439
- Publons: https://publons.com/researcher/1451618/ioan-serban/

Projects

- Young Research Team project, PN-II-RU-TE-2014-4-0359, 2015-2017, “Solutions to enhance the dynamic stability of microgrids with renewable energy sources”, – project leader;
- PhD national competition project, CNCSIS-TD303/2007-2008: “Contributions to the development of hybrid power systems with renewable energy sources” – project leader;
- ERANet - LAC Transnational Joint Call on Research and Innovation ELAC2015/T10 - 0761 RETRACT, 2017-2019, “Enabling Resilient Urban Transportation Systems in Smart Cities” – project member;
- FP6, CRISTAL 038406/DG TREN, 2007-2009, “Control of renewable integrated systems targeting advanced landmarks” – project member;
- IDEAS national competition project, CNCSIS-134/2007-2010, „Renewable Energy Sources and their Integration in Smart Hybrid Grids” – project member;
- Partnerships national competition project, D3 21062/2007-2010, „Hybrid Hydro-Wind Energy Structure” – project member;
- Partnerships National Competition Project, D1 110004/2007-2010, “Intelligent distributed system for improving the efficiency of Hydroelectric plants” – project member;
- 2005/2006 – PhD student scholarship from “World Federation of Scientists”.

Patents

- **I. Serban, "**Method for Decoupling the Oscillating Power for Single-Phase Inverters", OSIM Patent RO-130090/30.12.2020.
- **I. Serban**, C. Marinescu, "Sensorless control method of speed and power for permanent magnets small wind generators", OSIM patent RO-127975/30.06.2020.
- **I. Serban**, C. Marinescu, "Device and control method with three-phase dump load for autonomous generators with renewable energy sources", OSIM patent RO-126355/30.01.2017.
- **I. Serban**, "Method for harmonic current compensation with active load", RO-132508/A0, patent pending.

Other achievements

- Included in the **TOP 2% of the best scientists in the world**, created in 2020 by Stanford University, USA, together with the publishing house Elsevier and SciTech Strategies: https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/2
- **2015 Premium Award for Best Paper in IET Renewable Power Generation** - https://digital-library.theiet.org/content/journals/iet-rpg/info/prizes;
- Rewarding research results by the national research agency UEFISCDI, programme ISI articles 2008, 2011-2015, 2017-2020; https://uefiscdi.gov.ro/premierea-rezultatelor-cercetarii-articole
- Rewarding research results by the national research agency UEFISCDI, programme Patents 2017, 2020, 2021; https://uefiscdi.gov.ro/premierea-rezultatelor-cercetarii-brevete
- Best paper presentation in session "TT02 8 – Power Electronics II", within the 39th Annual Conference of the IEEE Industrial Electronics Society - IECON 2013;
- Prize for excellent research activity, within the *Transilvania* University Awards, 2007.

Memberships

- IEEE (Institute of Electrical and Electronics Engineers), IES (Industrial Electronics Society), PELS (Power Electronics Society)

Hirsch Indexes

- Google Scholar: H=18; https://scholar.google.ro/citations?user=F_yaERoAAAAJ&hl=ro
- Scopus: H=14; https://www.scopus.com/authid/detail.uri?authorId=22434123300
- Web of Science: H=14. https://publons.com/researcher/1451618/ioan-serban/

Scientific reviewer

- More than 150 reviews to ISI-WOS journals https://publons.com/researcher/1451618/ioan-serban/peer-review/