



## Curriculum Vitae

### Personal information

First name(s) / Surname(s) Ionuț Sorin Salcu  
 Telephone(s) 0748257391  
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 Nationality Romanian  
 Date of birth 09.dec.1992

### Work experience

Dates 2023 – Present  
 Name and address of employer Technical University of Cluj – Napoca, str. Memorandumului nr. 28 – Cluj Napoca – Romania  
 Occupation or position held Lecturer  
 Main activities and responsibilities Control System Theory - course and laboratory applications; Electronics – circuit design applications

Dates 2023-2024  
 Name and address of employer Technical University of Cluj – Napoca, str. Memorandumului nr. 28 – Cluj Napoca – Romania  
 Occupation or position held Electrical Engineer/ Researcher  
 Main activities and responsibilities Researching activities within the project CDI “SEICER” – “Development of an innovative electronic system for collecting energy from renewable sources” (MySMIS: 156450)

Dates 2021-2023  
 Name and address of employer Technical University of Cluj – Napoca, str. Memorandumului nr. 28 – Cluj Napoca – Romania  
 Occupation or position held Electrical Engineer/ Researcher  
 Main activities and responsibilities Research activity within the project “Forest funicular with hybrid drive and energy recovery” SMIS 120499

Dates 2016-2022  
 Name and address of employer Technical University of Cluj – Napoca, str. Memorandumului nr. 28 – Cluj Napoca – Romania  
 Occupation or position held Electrical Engineer/ Researcher  
 Main activities and responsibilities Master’s degree student and electrical engineer / PhD. student and electrical engineer  
 Dates Researching activities within the project POC “MICROINV” – “Microinverters with high power density and high efficiency for renewable energy sources” (ID: P\_40\_391, MySMIS: 105616)

### Education and training

Dates 2018-2023  
 Title of qualification awarded PhD in Electrical Engineering  
 Principal subjects/occupational skills Electrical engineering, Power Electronics in Renewable Energy Applications, Advanced Electronic Systems Modeling and Control Strategies.  
 Name and type of organization providing education and training Technical University of Cluj-Napoca, Faculty of Electrical Engineering, Department of Electrical Machines and Drives – division of Electronics and Power Electronics – TUCN IOSUD doctoral school

## Personal skills and competences

Mother tongue(s) Romanian

Other language(s)

Self-assessment

### Understanding

### Speaking

### Writing

European level (\*)

Listening

Reading

Spoken interaction

Spoken production

English

B2

B2

B2

B2

B1

## Didactic activity

Teaching Courses Control Systems Theory and Automation

## Significant books published in the last 10 years (max 10)

Mircea Bojan, Norbert C. Szekely, Sorin I. Salcu, Mircea Ruba, Petre D. Teodosescu, Aplicații Practice de Bază în Electronică, Vol. I, UTPRESS, Cluj-Napoca, 2023, ISBN 978-606-737-692-0

## Significant papers published in the last 10 years (max 10)

1. Vasile Mihai Suci, Sorin Ionut Salcu, Alexandru Madalin Pacuraru, Lucian Nicolae Pintilie, Norbert Csaba Szekely, Petre Dorel Teodosescu. Independent Double-Boost Interleaved Converter with Three-Level Output. Applied Sciences vol.11, no.13, an 2021, pp. 5993, doi.org/10.3390/app11135993
2. Norbert Csaba Szekely, Sorin Ionut Salcu, Vasile Mihai Suci, Lucian Nicolae Pintilie, Gheorghe Ioan Fasola, Petre Dorel Teodosescu, Power Factor Correction Application Based on Independent Double-Boost Interleaved Converter (IDBIC), Applied Sciences vol.12, no.14, an 2022, pp. 7209, doi.org/10.3390/app12147209.
3. Sorin Ionuț Salcu, Vasile Mihai Suci, Petre Dorel Teodosescu, Zsolt Mathe, The Condition Number Perspective in Modeling and Designing an Electronic IDBIC Converter. Electronics vol. 13, no.7, an.2024, pp.1302, doi.org/10.3390/electronics13071302
4. Lucian Nicolae Pintilie, Horia Cornel Hedeșiu, Călin Gheorghe Rusu, Petre Dorel Teodosescu, Călin Ignat Mărginean, Sorin Ionuț Salcu, Vasile Mihai Suci, Norbert Csaba Szekely, Alexandru Mădălin Păcuraru, Energy Conversion Optimization Method in Nano-Grids Using Variable Supply Voltage Adjustment Strategy Based on a Novel Inverse Maximum Power Point Tracking Technique (iMPPT). Electricity vol. 4, no. 4, an. 2023, pp.277-308, doi.org/10.3390/electricity4040017
5. Sorin Ionuț Salcu, Mircea Bojan & Gheorghe Ioan Fasolă, Integrating the Behavior at Reactive Power Flow in the Model of the Single-Phase PWM Rectifier, Proceedings of Seventh International Congress on Information and Communication Technology: ICICT 2022, August 2022 London, England, vol.4 pp. 607–615, ISBN: 978-981-19-2397-5
6. Adrian Mihai Iuoraș, Sorin Ionuț Salcu, Vasile Mihai Suci, Lucian Nicolae Pintilie, Norbert Csaba Szekely, Mircea Bojan, Petre Dorel Teodosescu, AC-DC Microgrid Analysis Using a Hybrid Real-Time HiL Approach, Proceedings of Seventh International Congress on Information and Communication Technology: ICICT 2022, August 2022 London, England, vol.3 pp. 589-600, ISBN: 978-981-19-2397-4
7. Calin G. Rusu; Iulian M. T. Birou; Sorin I. Salcu, Model Based Design Controller for Stand-Alone Conversion System with MPPT, 2022 IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR), 19-21 May 2022, Cluj-Napoca, Romania, pp.1-6, ISBN:978-1-6654-7933-2
8. Sorin Ionuț Salcu, Adrian Mihai Iuoraș, Norbert Csaba Szekely, Mircea Bojan, Călin Gheorghe Rusu, Gheorghe Ioan Fasolă, Active Power Factor Compensation Based on a Geometric Phase Control Scheme, 2020 IEEE 11th International Symposium on Power Electronics for Distributed Generation Systems (PEDG), 09 November 2020, Dubrovnik, Croatia, pp. 130-135, ISSN: 2329-5767
9. Alexandru Madalin Păcuraru, Sorin Ionut Salcu, Mihai Adrian Iuoraș, Ștefan Breban, Zsolt Mathe, Petre Dorel Teodosescu, Practical Implementation of an Electronic Controlled Actuator for Micro Wind Turbine Overspeed Protection, 2022 International Conference and Exposition on Electrical And Power Engineering (EPE), 20-22 October 2022, Iași, Romania, pp. 478-483, ISBN:978-1-6654-8994-2

Cluj-Napoca,  
Date: September 2024

Name and signature:  
Salcu Ionuț Sorin