



Ronald Musona

Home : Brasov, Romania

Phone: (+40) 0

ABOUT ME

Electrical Engineer specializing in control of power electronic-based power systems. Strong hands-on experience in MATLAB/Simulink modeling, real-time control implementation, Hardware-in-the-Loop (HIL) testing, and experimental validation with physical hardware setups. Demonstrated ability to design, implement, and test advanced control solutions for power electronic-based systems.

WORK EXPERIENCE

Transilvania University of Brasov

City: Brasov | **Country**: Romania

[02/2023 – Current]

Teaching assistant

- Conducting laboratory sessions for energy sources, static power converters and power electronics simulation courses.
- Prepare experimental setups and guide students through experiments

TAGTEL communications

City: Harare | **Country**: Zimbabwe

[03/01/2016 – 31/07/2016]

Radio networks engineer (intern)

- Installations of 3G WCDMA base stations .
- Core network installations - maintenance of computers

EDUCATION AND TRAINING

[03/10/2022 – Current]

PhD, Electrical Engineering

Transilvania University of Brasov www.unitbv.ro

City: Brasov | **Country**: Romania |

[01/10/2020 – 30/06/2022]

Masters in Advanced Electrical Systems

Transilvania University of Brasov www.unitbv.ro

City: Brasov | **Country**: Romania |

[01/08/2013 – 27/05/2017]

Bachelor of technology honors in Electronic Engineering

Harare Institute of Technology www.hit.ac.zw

LANGUAGE SKILLS

Mother tongue(s): Shona

Other language(s):

English

LISTENING C1 READING C1 WRITING C1

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

SKILLS

Microsoft Office package: Microsoft Word, Excel, PowerPoint, Access | programming: Python, MATLAB and SQL | MATLAB/simulink | Labview (basic level) | Plexim-PLECS | C, C# | PCB-Design

HONOURS AND AWARDS

First place- Student Conference Scientific Session, Transilvania University of Brasov, Jun 2022

Awarding institution: Transilvania University of Brasov

Awarded HIT book prize for the best graduating student in Technopreneurship, Oct 2017

Awarding institution: Harare Institute of Technology

PUBLICATIONS

- [2025] [Control of a single-phase islanded microgrid based on virtual oscillator control enhanced with power limitation and robust distributed secondary control](#)
Authors: R Musona and I. Serban | **Volume, Issue and Pages:** vol. 6, pp. 25-42
- [2023] [Differential Single-Phase Inverters With Active Power Decoupling: A Survey](#)
Authors: R. Musona and I. Serban | **Volume, Issue and Pages:** vol. 11, pp. 53654-53670
- [2025] [Improving Microgrid Operation by Integrating Virtual Oscillator Control and Active Power Decoupling in Single-Phase Inverters](#)
Authors: R. Musona, I. Serban and T. Kerekes | **Volume, Issue and Pages:** pp. 311-316
- [2025] [Control of a DC Microgrid Integrating a Single Phase Inverter and a Dual Active Bridge Converter for EV Charging and V2G Operation](#)
Authors: J. Sora, I. Serban and R. Musona | **Volume, Issue and Pages:** pp. 276-281
- [2024] [Active Power Decoupling on a Differential Single-Phase Inverter With Non-linear Load](#)
Authors: R. Musona and I. Serban | **Volume, Issue and Pages:** pp. 74-78
- [2023] [A Comparative Performance Analysis Between the Buck and Boost Differential Single-Phase Inverters with Active Power Decoupling](#)
Authors: R. Musona and I. Serban | **Volume, Issue and Pages:** pp. 1-6
- [2023] [A Single-Phase Reactive Power Compensator with Reduced-Size Film Capacitors and Active Power Decoupling Control](#)
Authors: I. Serban and R. Musona | **Volume, Issue and Pages:** pp. 1-5
- [2022] [A Comparative Analysis on a Single-Phase Inverter With a Reduced Component Count Power Decoupling Circuit](#)
Authors: R. Musona and I. Serban | **Volume, Issue and Pages:** pp. 333-338

HOBBIES AND INTERESTS

Soccer