

# NTWALI MUTAONA Samuel

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## RESEARCH INTERESTS

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- Artificial Intelligence, Data Science and Machine Learning applied to electric power systems and renewable energy.
- High Voltage, Medium Voltage and Low Voltage electrical networks and Smart Grids. .
- Power electronics, industrial automation and Internet of Things. .

## EDUCATION

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**Diploma Engineer (Bac+5, Engineering Degree) Electrical Engineering.**

University of Kinshasa/ Kinshasa, DR Congo — Octobre 2021 – juillet 2024.

**Bachelor of Science , Electrical Engineering.**

University of Kinshasa, Kinshasa, DR Congo — Octobre 2017 – Juillet 2021.

## PROJECTS AND RESEARCH

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**Computational Plasma Physics – Doctoral Research** Michigan State University — Since Aug 2022

**Electricity Theft Detection – MSc Research** AIMS Rwanda — Jan – Jun 2022

**Optimized PV System Design – MSc Research** Univ. of Lubumbashi — Oct 2017 – Apr 2018

**PID Tuning Methods Comparison – BSc Thesis** Univ. of Lubumbashi — Apr – Dec 2015

## PAPERS AND CONFERENCES

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**SCL Current Scaling – Poster** IEEE IVEC — Apr 2024

**Space Charge Effects – Poster** GEC — Oct 2023

**Short Pulse Beam Profiles – Poster** IEEE ICOPS — May 2023

**Net Metering Price Dynamics – Paper** IEEE PowerAfrica — Aug 2021

**LV Network with AI Cables – Paper** ISTE OpenScience — Jun 2020

**State of Energy Sector in Congo – Talk** Tabora Engineers' Conf. — Apr 2017

## WORK EXPERIENCE

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### Assistant Lecturer

Started in May 2026

### University of Kinshasa

Kinshasa, Congo DR

- Lecturing and student Suspension
- Research

### Project Engineer

September 2025 –

### Africa Development System (ADS)

Kinshasa , Congo DR

- Engine preventive maintenance
- Calculation of electrical Cones

## HONORS AND AWARDS

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One of the laureates of the STEM DRC Scholarship, 2020 Edition . <https://www.stemdrc.com/copy-of-lauréats-2021>

## TEACHING EXPERIENCE

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### Programmable Logic Systems

Univ. of Kinshasa

— Since Janvier 2020

### Power Distribution Networks

Univ. of Lubumbashi — 2019–2020

### Physics (Electromagnetism)

Univ. Katumba-Mwanke — 2018–2019

## COMMUNITY INVOLVEMENT

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### Tutor – Mount Hope Program

Lansing, MI, USA — Since Nov 2022

### Head – Scientific Dept. Cultural Center ESI

Lubumbashi — 2015–2017

### Soccer Team Assistant-Manager

Lubumbashi — 2015

### Volunteer Teacher – Programming/Robotics

Lubumbashi — Since 2020

## SKILLS

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**Languages:** English, French (Native), Swahili

**Programming:** Python (Pandas, PlasmaPy, TensorFlow, Keras), C, C++, MATLAB, Mathematica, Java

**Document Tools:**  $\text{\LaTeX}$ , Markdown, Microsoft Office Suite