Curriculum Vitae

Dr. Noah Kimutai Serem
PhD (University of Rwanda), MSc (Alexandria University), BEng (Moi University)

Personal Details

- **Address:** P.O. Box 1044-30300, Kapsabet, Kenya
- **Email:** noah.serem@uoeld.ac.ke | seremnoah85@gmail.com
- **Phone:** +254 729 363 938 | +254 788 577 170
- **Languages:** English, Kiswahili, Kalenjin

Research Interests

Smart grids, distributed generation, grid-connected renewable energy systems, power quality, electrical machines and optimization techniques.

Education

- **PhD in Electrical Power Systems** (Feb 2018 – Oct 2024)
  University of Rwanda (ACE-ESD), Rwanda
    - *Thesis:* Analysis of Power Quality of Grids Integrated with Power from Multiple Renewable Energy Sources.
- **MSc in Power Engineering and Electrical Machines** (Jan 2014 – Mar 2016)
  Alexandria University, Egypt
    - *Thesis:* Harmonic Filtering and Active Damping of LCL Filter Resonance in Grid-Tied Renewable Energy Systems.
    - Courses included: Microcontroller Control of Electric Drives, Renewable Energy Sources, Digital/Nonlinear Control Systems, Solar Cells, Mathematical Methods in Electrical Engineering.
- **BEng in Electrical and Electronics Engineering (Power Option)** (2007 – 2012)
  Moi University, Kenya

Professional Experience

University of Eldoret (UoE), Kenya

- **Senior Lecturer** (Feb 2025 – Present)
- **Lecturer** (May 2019 – Jan 2025)
    - *PhD Courses:* Engineering Analysis and Optimization, Intelligent Systems Applications
    - *MSc Courses:* Instrumentation, Control, and Measurement

- *BSc Courses:* Basic Electrical Machines, Power Systems, Control Systems, Basic Electronics

Departmental Roles:

- Departmental Examination Coordinator (Sep 2024 – Present)
- Online & Distance Learning Coordinator (2020 – Present)
- Quality Management Systems Coordinator & Risk Champion (2020 – Sep 2024)

Dedan Kimathi University of Technology, Kenya

- **Assistant Lecturer** (2017 – 2019)
  - Courses taught: Reliability Engineering, High Voltage Engineering, Electrical Machines, Machine Drives, Control Engineering I & II, Power Systems, Illumination Engineering.
  - Roles: Examination Coordinator (2018–2019), Industrial Trips Coordinator (2017–2018).

Moi University, Kenya

- **Adjunct Lecturer** (Jan 2024 – Present)
  - Taught courses in High Voltage Technology, Power Transmission & Distribution, Special Electrical Machines, Power System Dynamics, Motor Drives, and Electric Power Systems II.

Masinde Muliro University of Science & Technology (MMUST), Kenya

- **Part-Time Lecturer (MSc & BSc)** (2016 – 2017; Jan 2025 – Present)
  - MSc: Distributed Power Generation, Power System Automation, Advanced Protection, Operation & Control.
  - BSc: Control Systems I & II, State-Space Design, Digital & Nonlinear Control Systems, Instrumentation.

Rift Valley Technical Training Institute, Kenya

- **Lecturer (Part-Time)** (2016 – 2017)
  - Taught: Control Systems, PLCs, Microcontrollers, Power Systems.

Open University of Kenya (OUK)

- **Content Developer**
  - EET 323: Circuit Theory II (May–Jun 2025)
  - EET 223: Electrical Machines (Apr–May 2024)
  - EET 424: Control Systems (March to May 2026)

- **Online course facilitation/teaching**
    - EET 212: Circuit Theory I (September 2025 - Present)

Industry Experience

- **Director, Digital One Engineering Ltd** (2013 – Present)
    - Electrical distribution design, field survey, project costing, and construction supervision.

Awards & Scholarships

1. World Bank / Government of Rwanda (ACE-ESD) Scholarship for PhD – University of Rwanda (2018 – 2024)
2. Nile Basin Scholarship for MSc – Alexandria University, Egypt (2014 – 2016)
3. Higher Education Loans Board (HELB) sponsorship – Moi University (2007 – 2012)

Trainings & Certifications

- Online & Distance E-Learning (ODeL)
- ISO 9001:2015 Quality Assurance & Coordination
- Risk Management (Risk Champion)
- International Security Management Systems (ISMS)

IT & Technical Skills

- **Software:** MATLAB/Simulink, COMSOL, NEPLAN, PROTEUS VSM, ETAP
- **Programming:** C, Java
- **Other:** Microsoft Office Suite, Adobe PageMaker

Publications

1. Serem, N.K., Letting, L.K., & Munda, J.L. (2021). *Voltage profile analysis on a grid with power injection from a wind farm*. **MDPI Energies Journal**.
2. Serem, N.K., Munda, J.L., & Letting, L.K. (2021). *Static voltage stability analysis on Western Kenya Power network with wind power penetration*. **IEEE Power Africa Conference**.
3. Serem, N.K., Letting, L.K., & Munda, J.L. (2021). *Voltage profile and sensitivity analysis for a hybrid solar, wind, and hydro system*. **MDPI Energies Journal**.
4. Serem, N.K., Abbasy, N.H., & Youssef, K.H.M. (2015). *Comparative study of active damping methods of LCL filter resonance in grid-connected renewable systems*. **MEPCON (IEEE)**.
5. Serem, N.K. (2015). *Electrical Power Quality Improvement in Grid-Connected Renewable Energy Systems Using LCL Filter*. **IJSE Research, Vol. 6, Issue 10**.

Conferences Attended

- IEEE Power Africa Conference, Nairobi, Kenya (2021)
- Next Einstein Forum, Kigali, Rwanda (2018)
- Sustainable Energy Forum for East Africa, Kigali, Rwanda (2018)
- Africa Smart Grid Forum, Kigali, Rwanda (2018)

Ongoing PhD. and MSc. supervision

- PHD Thesis: Incorporating Greedy and BFS Algorithms in Real-Time Renewable Energy Management: Optimizing Renewable Forecasting and Resource Allocation in Smart Grids and Cities by Fred Rotich. (2024 to Present).
- MSc. Thesis: “Design and Evaluation of an AI- and IoT-Enabled Competency-Based Assessment System for Electrical Installation Training in TVET Colleges." By Sammy Ouma Malingu.

Professional Membership

- Graduate Engineer, Engineers Board of Kenya (EBK), Reg. No. B7795

Referees

1. **Prof. Cyrus Wekesa** – Associate Professor, Electrical Engineering, University of Eldoret
   Email: cwekesa@uoeld.ac.ke
2. **Dr. Lawrence Letting** – Senior Lecturer, Electrical & Electronic Engineering, Moi University
   Email: lettingLK@gmail.com | Phone: +254 721 285 691

3. **Eng. Douglas Omenda** – Senior Lecturer, Mechanical & Production Engineering, University of Eldoret
   Email: omenda@uoeld.ac.ke | Phone: +254 782 326 490