The University of KwaZulu-Natal (UKZN) is committed to Employment Equity with the intention to promote representivity within the Institution. Preference will be given to applicants from the designated groups.

COLLEGE OF AGRICULTURE, ENGINEERING AND SCIENCE

TWO POST-DOCTORAL FELLOWSHIP
Dec. 2025 – Nov. 2026
Department of Electrical, Electronics and Computer Engineering, Howard College, University of Kwazulu-Natal, Durban - 4001, South Africa.

REF NO.: EECE/2025-2

Founded in 1910 as the Natal University College in Pietermaritzburg, the University of Natal was granted independent university status in 1949 owing to its rapid growth in numbers, its wide range of courses, and its achievements in and opportunities for research. The distinctive Howard College building was opened in 1931. The University of KwaZulu-Natal (UKZN) is one of the largest, oldest, and most transformed universities in sub-Saharan Africa – a teaching and research-led university. The UKZN has an international reputation for academic excellence, outstanding research output, and African scholarship. We have links with over 250 international institutions, which facilitate ongoing collaborative academic partnerships.

In line with its research vision and mission, in the Department of Electrical, Electronics, and Computer Engineering, here is requirement for ***TWO* Post-Doctoral Fellows**.

Electrical Engineering (One Position)

The successful candidates for this position will be involved in the developing and analyzing Renewable Energy-based Micro Grid: Control and Protection ***OR*** Energy Poverty, Access to Energy. The project will propose an optimal energy-efficient design and methodology. The objective will be to improve the efficiency, operational aspects of a micro grid. The developed design techniques will aim to address the challenges of operation, control, and protection. A capacity evaluation of the design will be carried out and practical parameters will be developed to assist in the implementation of such systems. The candidate will be expected to apply technique of control and protection to improve the performance of a micro grid **/** switch using advanced control techniques and protection philosophies including optimization techniques.

Electronics Engineering (One Position)

We invite you to join our innovative research team at the University of KwaZulu-Natal. We explore cutting-edge solutions to enhance Microelectronics infrastructures. Our multidisciplinary approach combines Analogue Electronics, Digital Electronics, VLSI, and telecommunications engineering. We are seeking a highly motivated Postdoctoral Researcher to develop mathematical models and design that leverage the low power and high amplification of electronics switches using Cylindrical MOSFET transistors. The focus will be on identifying key trends, projections, and vulnerabilities within microelectronics systems. This is a unique opportunity to contribute to impactful research that shapes the future of connectivity. The main responsibilities of the successful candidate will be the following:

- Develop and implement mathematical modeling and simulation for analyzing switching parameters.
- Identify and evaluate trends and vulnerabilities in infrastructure.

- Collaborate with a team of researchers and industry partners.
- Publish findings in high-impact journals and present at conferences.
- Contribute to grant writing and funding proposals.

Duration and Salary:

Each post-doctoral fellowship is for 12 months, worth R200 000 per annum. It can be extended further one year, depending on the performance of candidate.

Minimum Requirements:

- Doctoral degree (PhD) in Electrical Engineering / Electronics Engineering / Microelectronics / Physics Computer Engineering or related discipline, should be completed within the **past three years**.
- Bachelor's and/or Master's in Electrical / Electronic / Microelectronics / Physics / Computer Engineering related area.
- Applicants must be under the age of 35 years.
- An adequate number of publications in the relevant area of expertise.
- Knowledge of various electrical/electronic device simulators is desirable.
- The ability to contribute to UKZN's mission and vision in terms of research.

Procedures and Dates:

1. Covering letter, 2. Curriculum Vitae, 3. Project Proposal (related to Energy efficiency / Sustainable model design/etc.), 4. Applicant's doctoral degree certificate or PhD award letter (all in a single .pdf document) should be addressed to:

Supervisors: Prof. (Dr.) Akshay Saha and Prof. (Dr.) Viranjay M. Srivastava and emailed to: saha@ukzn.ac.za and srivastava@ukzn.ac.za.

Applicants who do not meet the minimum requirements will not be considered.

The **subject line** must clearly indicate Ref. no.: **'*EECE/2025-2 Post-Doctoral Fellowship – Your Surname*'.**

The closing date for receipt of applications is **Friday, 5 Sept. 2025.**

Only shortlisted candidates will be contacted/communicated till **Friday 12 Sept. 2025.**

The interview will take place near **Third week of Sept. 2025.**

For selected International candidates, VISA should be applied till **2nd week of Oct. 2025.**

Tentative joining will be from **Dec. 2025.**

Alternatively posted to:

Prof (Dr.) Akshay K. Saha
Unite Building, Howard College,
University of KwaZulu-Natal,
Durban-4001, South Africa.

Useful Links:

About UKZN: www.ukzn.ac.za/about-ukzn/promotional-video/
About Research: https://scholar.google.com/citations?user=-Au_VlgAAAAJ&hl=en
https://scholar.google.co.za/citations?hl=en&user=XfEnNhwAAAAJ

***NOTE* - The research group reserves the right not to make an appointment for this advert. Should you not receive a reply or update by the 30 Sept. 2025, kindly consider that your application has not been successful.**