

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

POST-DOCTORAL FELLOWSHIP

01 June 2024 – 31 May 2025

**Discipline of Electrical, Electronic, and Computer Engineering, Howard College,
University of Kwazulu-Natal, Durban - 4001, South Africa.**

REF NO.: CAES/EEE/02/2024

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.

When one considers the rapid developments in Renewable Energy Sources, adoption of Battery Energy Storage Systems (BESS), Promulgation of Small-Scale Embedded Generation (SSEG), microgrids and the influx of DC loads (e.g. Electric vehicles), it is not surprising that **the interconnection of Distributed Energy Resources (DERS)** have been attracting considerable global attention. The development and deployment of DERS, in collaboration with the existing grid infrastructure, has the potential to significantly enhance the modern power grid, with improvements in reliability, flexibility and efficiency.

In line with its research vision and mission, there is a requirement for a Post-Doctoral Fellow in the Discipline of Electrical, Electronic and Computer Engineering. The successful candidate for this position will be involved in research that would seek to realize the potential of microgrids and the integration of energy storage into the grid.

The candidate will be expected to use applicable simulation software to model these systems and investigate its potential benefits for utility distribution system applications using the SpeedGoat real time simulator.

Duration and Salary:

The post-doctoral fellowship is for 12 months, worth R180 000 per annum.

Minimum Requirements:

- Doctoral degree (PhD) in Electrical / Electronic Engineering, etc. should be completed within the **past five years**.
- Bachelors and Masters in Electrical / Electronic Engineering related area.
- Applicants must be under the age of 35 years.

- An adequate number of publications in the relevant area of expertise (Microgrids, DERS).
- Real Time Simulation experience
- Experience using Matlab/ Simulink (or equivalent)

Procedures and Dates:

The following information (combined into a single pdf document) must be included when applying for the position;

1. Applications forms,
2. Covering letter,
3. Curriculum Vitae,
4. Project Proposal (related to the objective of this work),
5. Certified copy of applicant's doctoral degree certificate or PhD award letter.

Applications should be addressed to Dr Mohamed F. Khan and emailed to: KhanM@ukzn.ac.za (co-supervisors will be: Prof. Leigh Jarvis, Dr. Andrew Swanson).

The **subject line** must clearly indicate Ref. no.: '**CAES/EEE/02/2024 Your Surname**'.

Applicants who do not meet the minimum requirements will not be considered. The closing date for receipt of applications is **Friday, 10th May 2024**.

Only shortlisted candidates will be contacted/communicated till **Monday 13th May 2024**.

The interview will take place near the **3rd or 4th week of May 2024** (If required, the interviews will be held via an online medium)

It will be preferable if the successful applicant can begin work from **Monday, 3 June 2024**.

Alternatively posted to:

Dr. Mohamed F. Khan
Room 306, Electrical Engineering, EECE,
Howard College, University of KwaZulu-Natal,
Durban-4001, South Africa.

Useful Links:

<https://scholar.google.com.pk/citations?hl=en&user=YHG4XbUAAAAJ>

<https://scholar.google.com.pk/citations?hl=en&user=eg0fWEAAAAJ>

https://scholar.google.com.pk/citations?hl=en&user=E_dVkc0AAAAJ

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 01 June 2024, kindly consider that your application has not been successful.