

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 January 2022 – 31 December 2022

**Department of Electronic Engineering, Howard College,
University of Kwazulu-Natal, Durban - 4001, South Africa.**

REF NO.: VLSI/2021

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 Electronic Engineering, here is a requirement for Post-Doctoral Fellow. The successful candidate for this position will be involved in the developing and analyzing novel Transistors (e.g. DG, CSDG) MOSFET, FET, TFET, etc. The project will propose an optimal energy-efficient electronic transistor device design. The objective will be to improve the efficiency, switching speed, materials, and other parameters in terms of Microelectronics, Nanotechnology, and VLSI in Electronics circuits and devices. The developed design techniques will aim to address the challenges of CSDG MOSFETs. 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 Semiconductor Physics, Microelectronics Engineering, and optimization techniques to improve the performance of this CSDG MOSFET device even in adverse environments.

Duration and Salary:

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

Minimum Requirements:

- Doctoral degree (PhD) in Electronics Engineering / Microelectronics Engineering / Semiconductor / Nanotechnology, etc. should be completed within the **past three years**.
- Bachelors and Masters in Electronic Engineering.
- Applicants must be under the age of 35 years.
- An adequate number of publications in the relevant area of expertise.
- Knowledge of various electronic device simulators is desirable.
- The ability to contribute to UKZN's mission and vision in terms of research.

Procedures and Dates:

1. Applications forms, 2. Covering letter, and 3. Curriculum Vitae, 4. Project Proposal (related to CSDG MOSFET/VLSI DESIGN/Circuit Design/mathematical/simulation, etc.), 5. Certified copy of applicant's doctoral degree certificate or PhD award letter (all in a single .pdf document) should be addressed to Prof. (Dr.) Viranjay M. Srivastava and emailed to: srivastava@ukzn.ac.za OR viranjay@ieee.org.

The **subject line** must clearly indicate Ref. no.: '**VLSI/2021 Post-Doctoral Fellowship – Your Surname**'.

Applicants who do not meet the minimum requirements will not be considered. The closing date for receipt of applications is **Sunday, 10 Oct. 2021**.

Only shortlisted candidates will be contacted/communicated till **Tuesday 12 Oct. 2021**.

The interview will take place near **3rd week of Oct. 2021**.

For International candidates VISA should be applied till **Monday, 15 Nov. 2021**.

Joining will be from **Wednesday, 3 Jan. 2022**.

Alternatively posted to:

Prof (Dr.) Viranjay M. Srivastava
Room 4-12, Electronic Engineering, EECE,
Centre of Radio Access and Rural Technologies,
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.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 15 Oct. 2021, kindly consider that your application has not been successful.