

The University of KwaZulu-Natal (UKZN) is committed to meeting the objectives of Employment Equity to improve representivity within the Institution. Preference will be given to applicants from designated groups in accordance with our Employment Equity Plan.

COLLEGE OF AGRICULTURE, ENGINEERING AND SCIENCE

POSTDOCTORAL FELLOWSHIP

THEORETICAL AND APPLICABLE FUNCTIONAL ANALYSIS GROUP (TAFAG)

1 JULY 2024 – 30 JUNE 2025

SCHOOL OF MATHEMATICS, STATISTICS AND COMPUTER SCIENCE

HOWARD COLLEGE CAMPUS

REFERENCE NO.: MSCS04/2024

The Theoretical and Applicable Functional Analysis Research Group has a number of projects on numerical/fixed point iterative methods for optimization (nonlinear, continuous and non-smooth) with applications to applied sciences such as transportation, data analytics, image/signal processing, machine/deep learning and other real life applications. The incumbent will be required to work closely with the project leader in the Unit to provide research assistance on various projects; undertake literature surveys, develop numerical/fixed point iterative methods and convergence analysis of these methods and using MATLAB to write relevant codes and assist with the supervision of postgraduate activities.

The incumbents will report to Prof. O.T. Mewomo, the Head of the Theoretical and Applicable Functional Analysis Research Group.

Minimum Requirements:

- PhD in the relevant area of numerical/fixed point iterative methods with applications, bilevel optimization and machine/deep learning.
- An adequate number of publications in the relevant area of expertise.
- Knowledge and experience in the field of numerical/fixed point iterative methods and applications.
- Demonstrated experience in the development of numerical/fixed-point iterative methods and convergence analysis of these iterative methods.
- Excellent writing and MATLAB skills

Enquiries and details regarding the post may be directed to the leader of TAFAG, Prof. O.T. Mewomo at email: mewomoo@ukzn.ac.za; Tel. 031 260 1002.

The postdoctoral fellowship is for 12 months (renewable for another one year), worth R220 000 per annum. This is funded through the Theoretical and Applicable Functional Analysis Unit.

The closing date for receipt of applications 17 May 2024.

Applicants are required to submit the following:

- (i) **a covering letter highlighting their experience in meeting each of the minimum requirements as listed above**

- (ii) a detailed CV including the list of publications
- (iii) contact details for two referees
- (iv) a copy of the applicant's doctoral degree certificate or PhD award letter.
- (v) a certified copy of the applicant's ID / permanent residency document / foreigners must be ready to apply for/possession of relevant permits.

Applications must be emailed to the school research and higher degree administrator (Mrs Shereen Marimuthu), email: Marimuthus@ukzn.ac.za before the closing date. The subject line must clearly indicate the reference no. MSCS04/2024. Late applications will not be considered. Successful individuals will be contacted on or before 7 June 2024. An online interview will take place. The research group reserves the right not to make an appointment to this advert. Should you not receive a reply or update by the 14 June 2024, kindly consider that your application has not been successful.