

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

**SCHOLARSHIP ADVERT
PHD RESEARCHER: REMOTE SENSING OF HEAT STRESS
THREE YEARS BURSARY FUNDING,
PIETERMARITZBURG CAMPUS**

REF NO. SHEFS/SAR01/2025

The Sustainable and Healthy Food Systems – Southern Africa is a Wellcome Trust Funded six-year research programme that is based at UKZN, with multiple partners. These include the Institute of Natural Resources in PMB, the University of Zimbabwe, Lilongwe University of Agriculture and Natural Resources, Malawi University of Business and Applied Sciences, London School of Hygiene and Tropical Medicine, University College London, Aberdeen University, and Royal Veterinary College.

SHEFS-SA will catalyse the transformation of Southern African food systems and communities towards systems and communities that are healthy and resilient to climate risks. The consortium will focus on providing actionable evidence for informed decision-making and identifying and developing practical solutions for Climate Change mitigation and/or adaptation, while evaluating in detail how their effects connect to health, including mental health, through food security, food safety and nutrition. The programme deepens our work in South Africa, and expanded to include Zimbabwe and Malawi to ensure regional policy impact.

In the light of Climate Change mitigation strategies, the SHEFS- SA Programme and SARChI Chair in Landuse Planning and Management within the College of Agriculture, Engineering and Science (AES) are pleased to announce a Doctoral Fellowship on heat stress monitoring and impact modelling. The overall objective of the fellowship is to develop and validate models for heat stress and health outcomes using remotely sensed data and other datasets across different ecosystems. The focus will be on characterizing multi-scale (spatial and temporal) variations in heat stress or thermal discomfort and link to associated health outcomes. The impact of localized heat stress management such as cool roofs, building materials selection, urban greening and afforestation will be evaluated. The student will be based at the College of Agriculture Engineering and Science at University of Kwazulu Natal in South Africa.

As part of our transdisciplinary team, the successful candidate will be exposed to exciting research challenges and get many opportunities to foster their career growth through innovative solutions.

The successful applicant will be expected to engage in **full-time** Doctoral studies on the Pietermaritzburg Campus.

Minimum Requirements:

- MSc in Environmental Science, Geography, Remote Sensing/GIS, Ecology, Land/Natural Resources Management or other related fields, with strong evidence of remote sensing.
- Analytical GIS and or Remote Sensing with programming skills.
- Ability to use Python, R or STATA, numerical packages (such as NumPy, SciPy, and Pandas), machine learning and deep learning as part of routine data processing and analyses will be an added advantage.

Candidates who are self-motivated, rigorous, and responsible with a track record showing ability to conduct independent research are encouraged to apply.

The closing date for receipt of applications is 15 April 2025, however, this advert will remain open until the position is filled.

Enquiries and details regarding the post may be directed to Professor O Mutanga (Mutangao@ukzn.ac.za).

This appointment will be made in line with the University Guidelines/benchmarks which are available on the University Vacancies website at <http://vacancies.ukzn.ac.za/Academic-Process-Proc-Guides.aspx>

Fellowship Award applications should consist of:

- (1) CV (2) letter of motivation, (3) Full academic records, and (4) contact details of two academic referees to Andile Mshengu, Email: mshengua@ukzn.ac.za. The advert Reference Number MUST be clearly stated in the subject line.

Kindly note that the University of KwaZulu-Natal ("the University") is required to process any Personal Information (as defined by the Protection of Personal Act, 2013 "POPIA") submitted by candidates when applying for positions at the University. The provision of the Personal Information is a requirement in terms of the University's recruitment and selection process. The retention of any personal information is as a consequence of the University being bound by legislative requirements and / or good governance practices as well as record keeping for statistical purposes. The University will endeavour to ensure that the appropriate security measures are in place and implemented for both electronic and paper-based formats that are used for processing of the personal information recorded through this recruitment and selection process. We refer you to the University's relevant Section 18 notice at [http://vacancies.ukzn.ac.za/Libraries/General_Documents/Section_18_Notice - Employees and Potential Employees.sflb.ashx](http://vacancies.ukzn.ac.za/Libraries/General_Documents/Section_18_Notice_-_Employees_and_Potential_Employees.sflb.ashx)