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

**COLLEGE OF AGRICULTURE, ENGINEERING AND SCIENCE**

**POST DOCTORAL RESEARCHER: KZN COGTA DISASTER RISK REDUCTION (ONE POST)**

**ONE YEAR FIXED TERM APPOINTMENT (RENEWABLE UP TO MARCH 2026)**

**CIVIL ENGINEERING PROGRAMME, SCHOOL OF ENGINEERING**

**HOWARD COLLEGE CAMPUS**

**REF NO:** **WRGPD02/2024**

The Kwazulu-Natal Department of Cooperative Governance and Traditional Affairs has entered into an agreement with the University of KwaZulu Natal entitled “Programme of Action on Assessing and Improving Resilience (Disaster Risk Reduction) and Sustainability in Integrated Human Settlement Planning and Governance”.

The recent flood and landslide disasters in Kwazulu-Natal in April 2022 have sharply highlighted that climate changes are resulting in more frequent inclement weather patterns, which are anticipated to become more frequent and unpredictable with the impact intensifying with each event should no intentional, conscious decisions be taken swiftly. The flooding incident came as a test of the resilience systems' strength and effectiveness, exposing the existing loopholes on the adequacy of these measures, particularly in human settlement planning in most areas.

The state of the environment is also unable to cope with severe climate events, and a compromised natural environment also limits the ability of the city to adapt to climate change. Poorly planned development and illegal encroachments to sensitive environmental areas have compromised ecological functions and reduced the level of ecosystem services that the environment can provide. Flood control, detoxification of pollutants in water resources and control of sediment loads are examples of severely reduced ecosystem services due to the extensive loss of wetlands in the municipality due to poor planning. To avert devastation of this magnitude in the future, due diligence must be conducted on the efficacy of the available tools from a planning, implementation, and maintenance compliance perspective by the relevant stakeholders.

The Programme of Action intends to strengthen Municipal and Traditional Authority urban management and planning functions in settlements, focusing on reducing climate change disaster vulnerabilities and increasing settlement resilience.

The water research group in the Civil Engineering programme at the University of KwaZulu Natal is looking to recruit a Post-Doctoral Researcher as part of the Team to undergo the aforementioned research. The incumbent should have the following area of expertise,

**Stormwater systems/stormwater management/water resource management.**

Areas of activity include:

• Case study of the influence of stormwater/water resource planning and management (as a component of land use management) on climate change risks for integrated and resilient human settlement disasters based on hydrological underpinnings.

• Literature review of legislative and policy frameworks and gaps in Water resource/Stormwater planning and management as a component of the South African Land use management system.

• Literature review of innovative solutions in Water resource/Stormwater planning and management as a component of the South African Land use management system.

• Assessment of existing legislated spatial planning, land use, disaster management and environmental plans (and gaps in plans), associated risks regarding water resource/ storm water planning and management, and potential to mitigate risks.

• Identify key spatial planning and land use controls to mitigate risks and the resources required to implement priority controls.

The successful candidate should be dynamic, innovative, and self-motivated with a strong background in stormwater systems/stormwater management/water resource management and be expected to work in a transdisciplinary environment.

**Minimum Requirements:**

* South African Citizen or Permanent Resident.
* PhD in an appropriate discipline such as Stormwater systems/Hydrology/Water Management/Water resources/civil and environmental engineering/hydrogeology
* Demonstrated experience in this area of expertise.
* A proven research record as evidenced by some recent publications in peer-reviewed ISI/DHET-rated journals.
* The candidate must have completed his/her PhD within five years of the appointment.

The Post-Doctoral fellowship is funded by the KZN Department of Cooperative Governance and Traditional Affairs for a 1-year fixed term with a stipend of R280 000 per annum (non-taxable), renewable for an additional period up until 31 March 2026, upon satisfactory progress.

The successful applicant will be expected to engage in **full-time** postdoctoral studies under the supervision of Prof Muthukrishnavellaisamy Kumarasamy and Dr Joy Adu.

Candidates with a track record showing the ability to conduct independent research are encouraged to apply. **The closing date for receipt of applications is 29 November 2024. However, this advert will remain open until the position is filled.**

Enquiries and details regarding the post may be directed to the specific supervisors at the following contact details: [Kumarasamy@ukzn.ac.za](mailto:Kumarasamy@ukzn.ac.za) or [AduJ@ukzn.ac.za](mailto:AduJ@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:**

Applicants are required to submit the following: (1) CV with publication record, (2) letter of motivation, (3) Full academic records, and (4) contact details of two academic referees to Prof Kumarasamy and Prof Slotow, Email: [kumarasamy@ukzn.ac.za](mailto:kumarasamy@ukzn.ac.za) and [Slotow@ukzn.ac.za](mailto:Slotow@ukzn.ac.za). The advert Reference Number MUST be clearly stated in the subject line.