

28-29 OCT
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SPOTLIGHT ON

School of Engineering

Postgraduate students in the School of Engineering are part of a research community that focuses on using engineering, science and technology to understand challenges and develop solutions that can improve the world. Research in the school spans across a wide range of disciplines, including Agricultural Engineering, Chemical Engineering, Civil Engineering, Electrical, Electronic and Computer Engineering, Mechanical Engineering, Architecture and Land Surveying.



28 OCT

ORAL PRESENTATIONS

09H05 -15H30



Prof Glen Bright

Dean & Head of School

29 OCT

FLASH PRESENTATIONS

09H00 -12H30

OPENING PLENARY: KEYNOTE SPEAKER



Professor Frank Matose

*Professor and Environmental Sociologist,
University of Cape Town*

Frank Matose is professor and environmental sociologist in the Department of Sociology, University of Cape Town, South Africa.

His research focuses on the political ecology of conservation, collaborative forest management, and commons governance in Africa. His current research project is titled Resilient and Equitable Nature-based Pathways in Southern African Rangelands (REPAiR).

SCIENCE WITH JAZZ

Full Professor in the Discipline of Chemical Engineering at UKZN, where he also received his BSc Eng, MSc Eng and PhD degrees. He joined the Institution in 2013 as a lecturer and ascended to the position of Full Professor in 2024.

Lokhat was the Academic Leader for Chemical Engineering from 2019 to 2026 and is currently the uMngeni-uThukela Water Chair in Water Resources Research and Innovation, and the African Rainbow Minerals Chair in Sustainable Engineering and Process Intensification.



Professor David Lokhat
*Professor in Chemical Engineering,
University of KwaZulu-Natal*



Lu Dlamini
*Vocalist, Composer and traditional
instrumentalist*

Durban-based vocalist, composer and a traditional instrumentalist. Dlamini, who hails from the Natal South Coast and comes from a musical family, is known for her distinctive style, as showcased in her previous album, “Ulimilam.” In her reflections, Dlamini draws on South Africa’s complex history, noting the contrast between the hopeful songs of the past and the current challenges faced by many.

GALA DINNER KEYNOTE SPEAKER



Dr Kiara Worth
Storyteller and Photographer

Dr Kiara Worth is a storyteller and photographer based in Cape Town, South Africa, known for her work in sustainability activism and international negotiations. She has a background in political science and agriculture, and she covers topics such as climate change, biodiversity, and sustainable development in her photography and writing.

Kiara has been featured in major publications like the New York Times and The Guardian, and she has worked as a photo-journalist in Papua New Guinea, using her stories to communicate sustainability issues.

POSTGRADUATE RESEARCH PROJECTS

What happens when a waste-management project ends?

Ms Yashmika Ramlakhan's study takes a closer look at a question that is often overlooked: whether improvements made through externally funded interventions actually last once the funding and support have disappeared. Focusing on Quarry Road West, an informal settlement in eThekweni, she surveyed 329 households about a year after an 18-month municipal and community-based waste-management project had ended.

Her findings are striking: waste-management practices had largely returned to pre-intervention levels, regardless of whether households had participated in the project. Residents highlighted infrastructure and reliable services as more pressing needs than education, while waste-related livelihood activities also failed to continue after funding ended. Importantly, the research found that residents who felt they had a meaningful voice in decision-making were more likely to report positive outcomes.



Ms Yashmika Ramlakhan
PhD Candidate

Could satellites help find water leaks before they become major losses? The Department of Water and Sanitation's NoDrop Report indicates that there are 47.3% Non-Revenue Water losses, and 86% of these losses are due to physical loss (pipe leaks and burst pipes with the most affected areas being in remote and rural pipeline networks).

Mr Khethukuthula “Khetho” Ngcobo’s research, funded by the Water Research Commission, works with UKZN Water and Sanitation Research and Development (WASH R&D) Centre to develop a software prototype that could enable water utilities to use satellite imagery and GIS technology to monitor pipeline networks remotely. The prototype brings together data from multiple satellite systems – including Sentinel-1, Sentinel-2 and Landsat – using Google Earth Engine. By analysing changes in vegetation and water indicators along pipeline routes, the system is being designed to identify unusual patterns that could signal an underground leak. Geostatistical and machine-learning techniques will then help distinguish potential pipeline-related anomalies, with field testing planned to validate the approach.



Mr Khethukuthula Ngcobo
MSc Candidate



SCHOOL OF ENGINEERING



HIGHLIGHT VIDEO



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