



UKZN GRADUATION 2022

Friday 11 November 2022

Welcome to the CWRR Graduation Special

The University of KwaZulu-Natal held the Spring Graduation Ceremonies between 21 and 22 September 2022, and a number of CWRR students received their hard-earned degrees. To all our graduates, we say

CONGRATULATIONS and VERY WELL DONE!!



The CWRR Newsletter

Welcome to the second issue of the [CWRR Newsletter 2022](#) - the CWRR graduation special.

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Professional Engineer awarded a doctorate

Registered professional engineer Dr Dayton Tagwi was awarded his PhD in Engineering. Dayton's desire to study started after completing his Master's degree. His research topic has always been an area he was passionate about, and he identified the knowledge gap while working on his irrigation designs. He noted that after rigorous calculations coupled with the use of the norms and standards, one would expect to get the ideal or most efficient irrigation system. However, as the last step in the design process, one must cater for the secondary or minor head losses. The use of tables and estimations are often employed, leaving him uncertain about sizing irrigation systems. The desire to close this gap led to him pursuing a PhD titled "New Approaches to the Determination of Minor Frictional Losses in Irrigation Systems".

Dayton acknowledges the support he received from his supervisors, Dr Aidan Senzanje and Dr Gareth Largerwall. Dayton's PhD developed an empirical equation, named *the Dayton Equation*, that can confidently be used for quick, accurate and precise determination of minor losses in irrigation system design as a method or tool for use in spreadsheets or irrigation system design software such as IrrMaker or IrrCAD. Congratulations to Dr Tagwi, and all the best in your future endeavours.



Top awards for CWRR students

Hard work paid off for top CWRR students who were honoured at the College of Agriculture, Engineering and Science Student Awards hosted by Deputy Vice-Chancellor and Head of College, Professor Albert Modi. Ms Ameerah Jacob (top picture) was awarded the coveted Roland Schulze Award for the Top Third Year Hydrology Student Award, while Ms Kiara Brewer (bottom picture) was awarded the Albert T Modi Ubuntu Award. Hats off to them both!



Tenacity and perseverance pay off for CWRR graduate

Ms Khodani Khakhu started her MSc journey in 2020 and despite her studies coinciding with the start of the COVID-19 pandemic, which nearly disrupted her studies, she did not allow anything to deter her. She believes that "courage is not the absence of obstacles but the action in the presence of obstacles". Her thesis was titled "An assessment of the use of remote sensing to estimate catchment rainfall for use in hydrological modelling and design flood estimation". Ms Khakhu graduated with an MSc in Hydrology and was supervised by Prof. Jeff Smithers. On behalf of the CWRR, we say congratulations and all the best to you!



Congratulations to the following CWRR graduates

- ◆ **Londiwe Dlamini** graduated with an MSc in Hydrology. Her dissertation was titled "Applying the Social-Ecological-Systems Framework to Understand Impacts of Flooding in the Palmiet River Catchment" and she was supervised by Dr Sabine Stuart-Hill and Prof. Cathy Sutherland.
- ◆ **Lindiwe Nkabane** graduated with an MSc in Hydrology. Her dissertation was titled "Developing and Using a Verified and Quality-controlled Database for the Northern Maputaland Coastal Plain". She was supervised by Dr Michele Toucher and Ms Sue Janse Van Rensburg.
- ◆ **Ntombiyenkosi Nxumalo** graduated with an MSc in Hydrology. Her dissertation was titled "Exploring the Manifestation of Water, Energy and Food Nexus at a Local Scale through the Lens of Sustainable Livelihoods in the uMngeni Catchment, KwaZulu-Natal, South Africa" she was supervised by Dr Sabine Stuart-Hill.
- ◆ **Kimara Moodley** graduated with an MSc in Environmental Science. Her dissertation was titled "Modelling Future Land-use Change and Assessing Resultant Streamflow Responses: A Case Study of Two Diverse Southern African Catchments" she was supervised by Dr Michele Toucher and Dr Romano Lottering.
- ◆ **Niveef Bandu** graduated with a BSc in Hydrology.
- ◆ **Phumlani Ngcobo** graduated with a BSc in Hydrology.
- ◆ **Minenhle Ngubane** graduated with a BSc in Hydrology and Geography.
- ◆ **Shiluba Maduna** graduated with a BSc in Hydrology and Soil Science.
- ◆ **Thembisile Madlala** graduated with a BSc in Hydrology and Soil Science.

