

# POSTGRADUATE RESEARCH AND INNOVATION SYMPOSIUM 2024

## Industry Session:

uMngeni-uThukela Chair in Water Resources  
Research and Innovation

**Schedule of Student Presentations  
for uMngeni-uThukela Water Funded  
Research at the University of  
KwaZulu-Natal**

**DATE: 30 OCTOBER 2024 | LOCATION: Coastlands Musgrave Hotel in Durban**



# PROGRAMME OVERVIEW

Date	Time	Session / Themes
30 October 2024	08:30 - 09:00	Arrival Tea and Coffee
	09:00 - 09:05	Welcome
	09:05 - 09:20	Keynote Speaker
	09:20 - 11:10	Flood Studies and Water Supply
	11:10 - 12:10	Water Governance and Citizen Science
	12:10 - 12:50	Lunch
	12:50 - 15:10	Water, Effluent, and Sludge Treatment
	15:10 - 15:30	Tea
	15:30 - 16:30	Facilitated discussions and closing statements
	16:30 - 17:00	PRIS Closing Session

# PROJECT AND STUDENT PRESENTATIONS:

Time*	Name	Topic and Title	Degree	Academic Supervisor	U UW Industry Leader
09:00 - 09:05	Prof. Jeff Smithers	Welcome: uMngeni-uThukela Chair of Water Resources Research and Innovation			
09:05 - 09:20	Dr. Ntsapokazi Deppa	Keynote Speaker: Executive Scientific Services and Steering Committee Chair of the U UW Research Chair			uMngeni-uThukela Water

## FLOOD STUDIES AND WATER SUPPLY

Time*	Name	Topic and Title	Degree	Academic Supervisor	UW Industry Leader
09:20 - 09:40	Sandile Dladla	Enhancing Flood Risk Assessment Through Multivariate Frequency Analysis: A South African Perspective	PhD	Prof. J.C. Smithers Prof. O.J. Gericke Dr. T.R. Kjeldsen Dr. U. Maharaj	
09:40 - 10:00	Demian Mukansi	Detecting Trends in Rainfall and Flood Extremes and Non-Stationary Design Flood Estimation in KwaZulu-Natal	PhD Eng	Prof. J.C. Smithers Dr. T.R. Kjeldsen Dr. K. Johnson	Mr. Kevin Meier
10:00 - 10:20	Khanyisile Mnguni	Modelling, Assessment and Optimisation of Rules for Selected Umgeni Water Distribution Systems	MSc Eng	Prof. M. Kumarasamy Prof. J.C. Smithers	Mr. Kevin Meier Mr. Mark Scott
10:20 - 10:40	Glen Phumlane Ntfonga Mkhonta	Coupling Hydrologic and Hydraulic Modelling to Enhance Predictive Accuracy of Umgeni River Flood Forecasting	MSc	Dr. D. Kibirige Dr. S. Gokool	Ms. Futhi Vilakazi
10:40 - 10:50	Tea				
10:50 - 11:10	Thobani Ngwazi	An Assessment of Radon ( <sup>222</sup> Rn) Level in Aquifers Along the Umgeni Catchment: Health and Geohydrological Significance	MSc	Prof. S.K. Gurmessa	Ms. Futhi Vilakazi
<b>WATER GOVERNANCE AND CITIZEN SCIENCE</b>					
11:10 - 11:30	Carla Higgs	Developing an Indicator System to Assess Water Equity in South Africa: A Delphi Consensus	PhD	Prof. T. Hill Prof. R. Meissner	Mr. Kevin Meier
11:30 - 11:50	Tanisha Curtis	An Evaluation of the State of Citizen Science for Water Quality Monitoring	MSc	Dr. M. Graham Mr. S. Ngcobo Dr. J. Taylor	Ms. Futhi Vilakazi
11:50 - 12:10	Susan Risko	Water Governance in uMsunduzi Catchment: Politics and Construction of Socio-Economic and Environmental Values	PhD	Dr. C. Sutherland Dr. S. Stuart-Hill	
12:10 - 12:50	Lunch				

Time*	Name	Topic and Title	Degree	Academic Supervisor	UW Industry Leader
<b>WATER, EFFLUENT, AND SLUDGE TREATMENT</b>					
12:50 - 13:10	Nkosinathi Madlala	Experimental Validation of a Settling Velocity Model Using Post-Image Analysis	PhD	Prof. D. Lokhat	Ms. Megan Schalkwyk Mr. Peter Thomson Ms. Limakatso Biyela
13:10 - 13:30	Numeerah Ally	Standardised Methods for Analysing Emerging Contaminants in Wastewater to Enhance Water Quality Management	PhD	Dr. B. Gumbi Dr. S.T. Getahun	
13:30 - 13:50	Oyeladun Rhoda Adegoke	Removal of sulfamethoxazole from aqueous solutions by adsorption onto biochar/graphene oxide composites	PhD	Prof. B. Martincigh Prof. V. Nyamori	Ms. Megan Schalkwyk Mr. Peter Thomson Ms. Limakatso Biyela
13:50 - 14:10	Relebongile Morake	Evaluation of Biochar and Activated Carbon Produced from Different Feedstock for Use as an Adsorbent	MSc	Dr. S.S. Stringel Prof. D. Lokhat Prof. B. Martincigh	Ms. Megan Schalkwyk Mr. Peter Thomson Ms. Limakatso Biyela
14:10 - 14:30	Akhil Ramlucken	Development of Solar Thermal Drying Technologies for the Treatment of Faecal Sludge from On-site Sanitation Facilities and Sewage Sludge from Wastewater Treatment Plant	MSc	Dr. S.S. Stringel	Ms. Megan Schalkwyk Mr. Peter Thomson Ms. Limakatso Biyela
14:30 - 14:50	Kirthi Rampersad	Development of a Urine Evaporator for Innovative Non-Sewered Sanitation Systems	MSc	Dr. S.S. Stringel Dr. J. Pocock	Ms. Megan Schalkwyk
14:50 - 15:10	Yashen Pather	15an	MSc	Dr. J. Pocock Dr. S.S. Stringel Dr. R. Seodigeng	Ms. Megan Schalkwyk
15:10 - 15:30	<i>Tea</i>				
15:30 - 16:30	<i>Facilitated discussions and closing statements</i>				
16:30 - 17:00	<i>PRIS Closing Session</i>				
* Approximate times					
** Presenter unavailable. Presentations to be provided post symposium.					
	Indicates online presentation due to travel constraints				