

GROUNDWATER CONFERENCE PROGRAMME

07:00 REGISTRATION DAY 1 – MONDAY, 18 OCTOBER 2021		
08:00	Welcome Diamond 1 Session Chair: F Fourie Kwazikwakhe MAJOLA GWD Gauteng Conference Chair	
08:30	Opening Address Dhesigen NAIDOO* Presidential Climate Change Ambassador	
09:00	Keynote Address David KREAMER International Association of Hydrogeologists (IAH)	
09:30	Guest Speaker Neno KUKURIC International Groundwater Resources Assessment Centre (IGRAC)	
10:00	<i>Icebreaker</i>	
10:10	COMFORT BREAK / *Poster Spotlight* Hendrik Botha, Angelo Johnson, Ritshidze Nenweli	
	Session 1: Resilience 1 Diamond 2 Chair: Y van Wyk Session 2: Visibility 1 Diamond 1 Chair: N Breedt	
10:30	The application of machine learning for groundwater level prediction in the Steenkoppies compartment of the Gauteng and Northwest dolomite aquifer, South Africa - Kristy GIBSON Umvoto Africa	Diamonds on the soles of their feet: groundwater monitoring in the Hout Catchment, Limpopo Jacqueline GOLDIN University of the Western Cape
10:50	Managed aquifer recharge in South Africa (MARSA) Jens AAMAND Ramboll	Strengthening South Africa's groundwater regulatory framework: The case of the unprotected dolomitic aquifer of Delmas Carin BOSMAN CBSS
11:10	Sharing water resources and the complexities around it: Three Case Studies from the Western Cape Christel VAN STAADEN Geoss South Africa	Intraplate tectonic setting of the southwestern Cape, South Africa: Analysis of the TrigNet geodetic record Lechelle GOSLIN Umvoto Africa
11:30	Conjunctive use of water resources Jan KÜRSTEIN Ramboll	Using geophysics to detect water-hosting fractures in the Vredefort Dome: A training opportunity Stephanie SCHEIBER-ENSLIN University of the Witwatersrand
11:50	Assessment of the state of potable water supply system in selected communities of Vhembe District Municipality, South Africa Tuwani MALIMA University of Venda	Test pumping Well field analysis of a heterogeneous fractured rock aquifer. Reuben LAZARUS Geoss South Africa
12:10	LUNCH BREAK ~ Visit our Exhibitors & Network Hub during all the breaks~	
	Session 3: Research 1 Diamond 2 – Chair: A Johnston	WORKSHOP:(Session 4) Groundwater Mapping and Assessment Diamond 1 – Chair: JE Larson
13:10	Transport and attenuation of microplastics in saturated sands Sebastian STENZL University of the Western Cape	
13:30	Test pumping derivative analysis to improve conceptual understanding in a complex aquifer: Steenbras Wellfield. Kevin DE BRUIN Umvoto Africa	What is in a - groundwater - map? Nicolette VERMAAK University of the Free State Jørgen E. LARSEN
13:50	Hydrocarbon groundwater analyses: a Karoo case study Danita HOHNE Department Water & Sanitation	AI_GEO software platform for regional groundwater potential mapping Emmanuel SAKALA Council for Geoscience
14:10	The presence and concentration of antiretroviral drugs in different water bodies around the Western Cape Phumelele MAPHUMULO University of the Western Cape	Testing Danish groundwater mapping methodologies in South Africa, Case Ladysmith, South Africa Jan KÜRSTEIN Ramboll
14:30	Managed aquifer recharge - evaluating the efficiency of the unsaturated zone to reduce contaminants. A case study of Atlantis aquifer Londiwe NTSHANGASE University of the Western Cape	Exploring Danish experiences for Groundwater mapping in South Africa Anker Lajer HØJBERG* Ramboll
14:50	Prefeasibility Study for Managed Aquifer Recharge within the Greater Kruger National Park, Limpopo Province, South Africa. Michael HOLLOWAY Institute of Groundwater Studies	
15:10	COMFORT BREAK / *Poster Spotlight* Nathasha Gariremo, Charissa Worthmann, Lerize van Wyk, Mikyle Cloete	
	Session 5: Innovation 1 Diamond 1 – Chair: N Vermaak	Session 6: Management 1 Diamond 2 – Chair: K Majola
15:30	Geophysical Borehole Siting at Elizabeth Conradie School in Kimberley, Northern Cape Province, South Africa Matome SEKIBA Council for Geoscience	Optimized groundwater monitoring design for managed aquifer recharge using hybrid numerical, geophysical and chemical modelling approach Clinton ANDRIES Atlantis Foundries/ UWC
15:50	Optimizing borehole performance through dynamic flow and chemistry profiling Steve KALULE USK	Assessing groundwater dependence of wetlands and streams within the Table Mountain Group Aquifer: A Case Study from the Kogelberg Dale BARROW Geoss South Africa
16:10	Sustainable rehabilitation of production boreholes Application of pH-neutral iron(III) dissolvers by closed-circuit injection Paivi PURONPÄÄ-SCHÄFER Cleanwells	Expanding the boundaries of the Eastern Kalahari Karoo Transboundary Aquifer (EKK-TBA) shared between Botswana and Zambia: A governance challenge Kevin PIETERSEN L2K2 Consultants (Pty) Ltd
17:00	GWD AGM	
18:00	<i>Cocktail Function (RSVP)</i>	

GROUNDWATER CONFERENCE PROGRAMME

08:00 REGISTRATION DAY 2 – TUESDAY, 19 OCTOBER 2021	
08:30	Diamond 1 Session Chair K Majola Guest Speaker: Relationship between driller and Hydrogeologist Colin Rice
09:00	Plenary Address: SACNASP and CPD – The Professional's Journey Matthys Dippenaar University of Pretoria, South African Chapter President International Association of Hydrogeologists (IAH)
09:30	Plenary Address: Practitioners' Code of Practice Nicolette Vermaak University of the Free State, Vice-Chairperson of the Ground Water Division, GSSA
10:00	COMFORT BREAK / *Poster Spotlight* Kimberley Murray, Akhona Maqhubela, Elvis Tamilo, Lesedi Sipuka
	Session 7: Research 2 Diamond 1 – Chair: M Dippenaar
10:30	Water Research Commission and Proposals Yazeed VAN WYK Water Research Commission
10:50	Groundwater in SADC Research Vision James SAURAMBA SADC-GMI
11:10	The Seven Deadly Sins of Numerical Modelling Andries WILKE GCS Water and Environment
11:30	Geochemical investigations to improve the prediction of mine water impacts: A case study in the Elandsfontein Aquifer System, West Coast Angelo JOHNSON University of the Western Cape / SANParks
11:50	Towards a conceptual understanding of groundwater-ecosystems interactions in the Tuli-Karoo transboundary aquifer Kwazikwakhe MAJOLA Department of Water and Sanitation
12:10	LUNCH BREAK ~ Visit our Exhibitors & Network Hub during all the breaks~
	Session 9: Management 2 Diamond 2 – Chair: J Nel
13:10	"But is it 'pollution'?" - determining appropriate site-specific regulatory limit values for groundwater quality. Carin BOSMAN CBSS
13:30	The Importance of Reliable Monitoring Data Shuaib DUSTAY SRK Consulting
13:50	Fracking regulations to protect groundwater resources during unconventional oil and gas extraction]: Getting it right. Surina ESTERHUYSE University of the Free State
14:10	Update of regional groundwater flow models for the Vaal Gamagara SD1 and SD2 wellfields Martin HOLLAND Delta-H Water Systems Modelling
14:30	The onset of iron biofouling in boreholes in and around Cape Town Roger PARSONS Parsons & Associates
14:50	Practical Solutions for Academic Based Applications in Understanding the importance of correct aquifer test data interpretations Jorette VAN ROOYEN Veltwater Groundwater Specialists
15:10	COMFORT BREAK / *Poster Spotlight* James Berkland, Yazeed van Wyk, Tarika Isaac, Jared van Rooyen
	Session 11: Mentorship Diamond 1 – Chair: A. Magingi
15:30	Mentoring at Umvoto and the Umvoto Trust Kornelius RIEMANN* Umvoto
15:50	Young Professional Mentoring Experience
16:10	Annalisa VICENTE Voices of Young professionals: Survey Results
18:30	<i>Conference Dinner (Rsvp/ Tickets)</i>
	Session 8: Resilience 2 Diamond 2 – Chair: N Breedt
	Latest approaches and examples illustrating the key role of numerical modelling in sustainable groundwater use in South Africa Analisa VICENTE SRK Consulting (South Africa)
	Assuring supply during a changing environment focusing on drought Danita HOHNE Department of Water and Sanitation
	The Role of GRACE data in mapping groundwater drought in the Southern African Development Community: Updating the groundwater drought risk map Zaheed GAFFOOR* University of the Western Cape
	Half Full or Half Empty? Groundwater surface water interactions – An ever-increasing focus for water resource management. Sonia VELTMAN Veltwater Groundwater Specialists
	A changing environment focusing on drought Fanus FOURIE Department of Water and Sanitation
	WORKSHOP:(Session 10) Groundwater Awareness* Diamond 1 – Chair: N Vermaak
	Groundwater Project: Release of Wally and Deanna Translation Everton DE OLIVIERA Ground Water Project
	Groundwater Kids Izelda MBATHA Nedbank Community Outreach Representatives
	Groundwater Kids Award Ceremony Age 6 – 9: Colouring competition Wally and Deanna Age 10 – 13: Colouring competition of buildings with windpumps
	How to get involved? Open Discussion

GROUNDWATER CONFERENCE PROGRAMME**08:00 REGISTRATION DAY 3 – WEDNESDAY, 20 OCTOBER 2021**

08:30	Session 12: Resilience 3 Diamond 2– Chair: J Nel Suitability of drilling techniques for geological interpretation and borehole design within the Cape Flats Aquifer, Western Cape Sasha Dean SINGH Umvoto Africa	Session 13: Management 3 Diamond 1 – Chair: M Dippenaar Sustainable Groundwater Development Perspectives: Differences in sustaining individual abstraction rates based on test pumping data analysis with recharge based firm yield estimations for an aquifer or localised area. Kes MURRAY Geoss South Africa
08:50	Hydrogeological Characterization of a Methyl-Tertiary-Butyl-Ether (MTBE) Plume Bamanye TAKASHE Nelson Mandela University	Assessment of concentration levels of contaminants in groundwater of Soutpansberg Region, Limpopo Province, South Africa Lindelani LALUBE* Department of Water and Sanitation
09:10	An investigation of the natural groundwater recharge and discharge of the Saldanha Bay Aquifer Systems, South Africa Aqeela PARKER University of the Western Cape	Development of an Aquifer Management Plan for the Polokwane Urban Complex Sivashni NAICKER Department of Water and Sanitation
09:30	An innovative approach to dealing with elevated iron concentrations at the Knysna Hospital Roger PARSONS Parsons & Associates	Science-Policy Nexus: Assessing role of groundwater resource directed measures in water resources protection practice, case of Schoonspruit-Koekemoerspruit River Catchment, South Africa Stanley NZAMA* Department of Water and Sanitation
09:50	Observation and monitoring of field parameters for springs and rivers of a Swiss alpine valley in relation to seasonality Cedric MEIER Private Consultant	Estimating hydraulic conductivities through the measurement of streaming potentials in Karoo aquifers Jemias Clifford Water Resources Consultants Pty (Ltd)
10:10	COMFORT BREAK / *Poster Spotlight* Jureya Dildar, Sisipho DLakiya	Final Poster Evaluations Close
10:40	Session 14: Resilience 4 Diamond 2– Chair: Y van Wyk Identifying suitable sites for Managed Aquifer Recharge within the Saldanha Bay Local Municipality, situated in the West Coast of South Africa Ashleigh TOMLINSON University of the Western Cape	WORKSHOP:(Session 15) Regulations* Diamond 1– Chair: K Majola Stakeholder Engagement Unconventional Gas Regulations for Water Use by DWS Lebogang MALEFANE Department of Water and Sanitation Leshego MAFUZA Department of Water and Sanitation
11:00	Test Pumping: Comparing the Farmer Test, Constant Head Test and SANS 10299-4:2003 methodologies with regards to estimating groundwater abstraction. Data, analyses and recommendations. Kes MURRAY Geoss South Africa	<i>*Final Programme to be released</i>
11:20	Investigating groundwater and surface water interactions using stable isotopes and hydrochemistry in the Notwane River Catchment, South East Botswana Piet KENABATHO University of Botswana	
11:40	The presence and concentration of antiretroviral drugs in different water bodies around the Western Cape Aarifah WILLIAMS Nelson Mandela University	
12:00	LUNCH ~ Visit our Exhibitors & Network Hub during all the breaks~	
13:00	Open/ Public Session Diamond 1– Chair J van Rooyen BIOGRIP/WRC/GWD SESSION Biogeochemistry Research Infrastructure Platform	
15:00	COMFORT BREAK	
15:30	CONFERENCE CLOSING CEREMONY Diamond 1– Chair N Vermaak Feedback From Rapporteurs; Awards	
16:00	Closing Remarks Fanus FOURIE GWD National Chairperson Matthys DIPPENAAR IAH 2023 LOC Chairperson - <i>Passing the Torch!</i>	

POSTER PRESENTATIONS

- Hendrik BOTHA** GCS Impact of Engineered Tree Plantations on Water Transfer Through the Upper Vadose Zone and Implications on Vertical Groundwater Recharge
- Angelo JOHNSON** UWC Aquifer structure and extent based on Airborne Geophysical investigation: A case study based in Saldanha Bay Local Municipality, West Coast.
- Ritshidze NENWELI** SU Evaluating changes in groundwater storage during the 2015-2018 drought in the Western Cape using GRACE data
- Nathasha R. GARIREMO** NMU Hydrogeological modeling of a coastal wetland: The development of a steady-state numerical groundwater flow model for Rietvlei Wetland, Cape Town.
- Charissa WORTHMANN** UFS FrackSA: A tool to aid in the enforcement of groundwater regulations during unconventional oil and gas extraction
- Lerize VAN WYK** GCS Water Quality Guidelines: Which to use and where applicable?
- Mikyle CLOETE** UWC The fate and occurrence of pharmaceuticals in Cape Town's water network
- Kimberley MURRAY** UJ.A redescription of groundwater amphipods (Crangonyctoidea: Sternophysingidae) from karstic aquifers in Gauteng, South Africa
- Akhona MAQHUBELA** NMU Groundwater monitoring of South Africa through numerical model
- Elvis TAMILO** Using geophysics to detect water-hosting fractures in the Vredefort Dome
- Lesedi SIPIKA** NMU Development and testing of a hydrogeological multilevel sampling device and analysis of water chemistry through hydrochemical parameters
- James BERKLAND** NMU Analysis of groundwater sampling methods used within uranium-rich fractured rock aquifers of the Beaufort West region
- Yazeed VAN WYK** WRC Combined use of Environmental and Artificial Tracers to Characterise the Vadose Zone
- Tarika ISAAC** GCS eSymon - An Innovative Solution to Monitoring Data Management
- Jared VAN ROOYEN** SU Stable isotope techniques for the evaluation of water sources for domestic supply in Stellenbosch, South Africa
- Jureya DILDAR** WITS Integrated approach to understanding the causes of ground subsidence in the Lyttelton Formation, Jan Smuts House: A potential case study to the greater Centurion
- Sisipho DLAKIYA** NMU Measuring hydraulic conductivity across different scales using varying methods to develop a hydraulic conductivity mode