PRELIMINARY COURSE AND SYMPOSIUM PROGRAMME

PRELIMINARY PROGRAMME - **IAH-SYMPOSIUM 2026** - GROUNDWATER QUALITY 2026

Time | Date	Tues, 25 August	Wed, 26 August	Thurs, 27 August	Fri, 28 August
Morning	Pre-Symposium Course	Registration desk open	Registration desk open	Registration desk open
		Full day Symposium	Half day Symposium	Half day Symposium
Midday	Symposium build-up	Lunch and refreshments served in the exhibition venue		Lunch and refreshments
Afternoon				Symposium Closes
	Exhibitors access to set-up exhibits		Field Excursion & Networking Function	
	Registration 13:00 - 16:00			
Evening		Symposium Dinner		

Revised May 2026 - The preliminary programme is subject to change without prior notice.

Important to note that the pre-symposium is available to symposium delegates only.

Please see the cost of the Course and the Symposium on the Registration Information on the website.

PRE SYMPOSIUM COURSE

Tuesday, 25 August 2026, STIAS Conference Centre

Presenter: Dr. Meris Mills - PhD Geology, Environmental Geochemist

PHREEQC is a free computer program that was developed by David Parkhurst at the USGS for simulating chemical reactions in water. It was originally developed to calculate the equilibrium chemistry of aqueous solutions interacting with minerals, gases, solid solutions, exchangers, and sorption surfaces, but has been expanded to enable modelling of kinetic reactions and 1D (one-dimensional) transport. The software has multiple applications in hydrogeology, for example determining the changes in water quality that would be expected when water is injected into an aquifer, identifying the chemical reactions that may occur between water and rock along a groundwater flow path, predicting the extent of movement of contaminants within an aquifer, understanding the controls on water quality etc.

PHREEQC was coded in C++ in 1995, with a graphical user interface added in 2002. It is immensely powerful, but not necessarily that user friendly.

This hands-on course will decode the mysteries of PHREEQC by showing how to complete simple but useful tasks using the software. Aspects that will be covered will include identifying mineral controls on water quality, determining speciation of chemical elements, predicting whether minerals will precipitate or dissolve, mixing one or more solutions together and adding a reactant into the water.

Agenda:
09:00 - 10:30 - PHREEQC Basics

10:30 - 11:00 - Tea

11:00 - 12:30 - Solutions & equilibrium phases

12:30 - 13:00 - Lunch

13:00 - 14:30 - Mixing & reaction

14:30 - 15:00 - Tea

15:30 - 17:00 - Transport & kinetics

Target audience: Hydrogeologists and Hydrogeochemists

SYMPOSIUM - INVITED KEYNOTE & INVITED SPEAKERS

Wednesday, 26 – Friday, 28 August 2026, STIAS Conference Centre

KEYNOTE: Dr. Feifei Cao - Senior Groundwater Specialist - Netherlands

Presentation: Advancing Groundwater Quality Assessment: Data Challenges, Global Collaboration And Emerging Ai Solutions

Dr. Feifei Cao is a Senior Groundwater Specialist at the International Groundwater Resources Assessment Centre (IGRAC) in Delft, the Netherlands. She specializes in hydrogeology, environmental geochemistry and contaminant transport in groundwater.

Her research has been primarily centred on intricate issues of groundwater pollution and contaminant transport (e.g., arsenic, nitrate, perchlorate), the impact of climate change on groundwater dynamics, and groundwater quantity and quality assessment from regional to global scales. Currently, she actively participates in various groundwater-related international projects at IGRAC.

She is passionate to collaborate with fellow researchers and experts to make a positive impact on sustainable groundwater management.

INVITED SPEAKER: Dr Surina Esterhuyse - Researcher at the Centre for Environmental Management, University of the Free State

Presentation: From baselines to regulation: Advancing groundwater protection during unconventional oil and gas development in South Africa

Dr Surina Esterhuyse is a researcher at the Centre for Environmental Management, University of the Free State, South Africa, with more than 25 years of experience in hydrogeology and groundwater management. Her research focuses on groundwater resource management, protection, governance, and the science–policy interface. She has particular expertise in developing strategies to minimise the environmental impacts of unconventional oil and gas development on groundwater resources through baseline monitoring, risk assessment, regulatory frameworks, and environmental management tools.

Dr Esterhuyse led the development of the interactive vulnerability map and monitoring framework for unconventional oil and gas development for the South African Water Research Commission (WRC). She also contributed to the Strategic Environmental Assessment for Shale Gas Development in South Africa and co-edited Hydraulic Fracturing in the Karoo: Critical Legal and Environmental Perspectives with Jan Glazewski. Through her research, she seeks to bridge the gap between science and policy to improve groundwater protection and long-term water security in South Africa and other water-scarce regions.

INVITED SPEAKER: Dr. Meris Mills - PhD Geology, Environmental Geochemist

Presentation: Avoiding analysis paralysis: getting the most from your water quality data

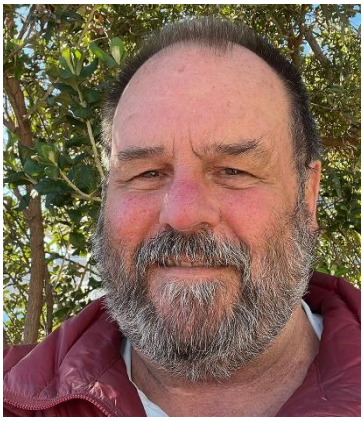
Meris became interested in environmental geochemistry during her Geology Honours studies at Wits, where she researched the geochemical processes occurring in the Okavango Delta. She later completed an MSc in Environmental Geochemistry and a PhD at UCT looking at the causes of iron clogging in boreholes.

She has worked as an environmental consultant for over 20 years, initially focused on oil and gas projects, and later becoming more involved in mining projects, specifically acid rock drainage and metal leaching studies. Projects that she has worked on have been in Africa, Europe and Asia, and across multiple commodities, including base metals, coal, gold, uranium and diamonds, for numerous multinational mining companies. Meris has extensive experience working with large water quality datasets, undertaking laboratory analyses, geochemical modelling with PHREEQC, and data management.

She has a passion for presenting large quantities of data in a clear and meaningful way, using databases and coding as tools to maximise the value of large datasets.

INVITED SPEAKER: Dr Roger Parsons - Roger Parsons Groundwater Consultant

Presentation: From Benchmarks to Burdens: The Case for Revising South Africa's Drinking Water Standard



Dr Roger Parsons has been a practicing hydrogeologist for more than 40 years. He worked for the Department of Water and Sanitation and the CSIR Groundwater Programme before establishing his own consultancy.

He has been actively involved in societies deal with water in general and groundwater in particular. As a general groundwater consultant he has a particular interests in the sustainable use of groundwater and the impact of that use on the environment.

INVITED SPEAKER: Gert Meiring -Pr Tech Eng FWISA – Director Professional Engineering Technologist Civil Service Group, Upington

Presentation: The challenges of utilizing groundwater sources for municipal use in the Northern Cape province

Gert Meiring is a Professional Engineering Technologist with over three decades of experience in civil and water engineering. He holds a National Higher Diploma in Civil Engineering from the Cape Technikon (now Cape Peninsula University of Technology), specialising in water engineering. He began his career with the Department of Water Affairs in the Western Cape before moving to Upington, where he gained extensive experience managing bulk water supply infrastructure, including canals, pipelines, and treatment systems.

From 1997 to 2003, he served at the Upington Municipality, where he progressed to Control Technician: Water Care, overseeing operations and maintenance of large-scale water and wastewater treatment facilities. During this time, he developed strong expertise in mechanical, electrical, and instrumentation systems, and played a key role in implementing preventative maintenance strategies. He also gained international experience in Egypt as a project manager and resident engineer on agricultural and infrastructure developments.

Since 2004, Gert has been with BVi Consulting Engineers in the Northern Cape, where he is now a director. His work focuses on the design, refurbishment, and management of bulk water and wastewater infrastructure, with significant involvement in groundwater supply schemes across the Hantam Karoo. He is also a co-author of a provincial operations and maintenance manual and is known for his practical, hands-on approach—often describing himself as a "specialist generalist."

INVITED SPEAKER: Liesl Koch - Manager: SHE Environment at Sasol

Presentation: Industrial Contamination and Groundwater Quality in Africa: Lessons, Risks and Pathways to Recovery

Liesl Koch is an accomplished environmental scientist with over 20 years of professional experience spanning groundwater and surface water management, contaminated lan d, waste management, air quality, biodiversity, and environmental governance. She holds an MSc in African Mammalogy and has built a career that bridges strong scientific foundations with applied environmental management in complex industrial settings.

Liesl is currently the Manager: SHE Environment at Sasol, where she leads a multidisciplinary team responsible for environmental compliance and performance across various Sasol operating entities. Her work focuses on safeguarding licence-to-operate through rigorous regulatory compliance, environmental risk management, and the integration of sustainable solutions into operational decision-making. This includes oversight of water use licences, environmental authorisations, contamination assessment and remediation programmes, and ISO 14001 systems.

Throughout her career, Liesl has been closely involved in the assessment and management of groundwater quality impacts, particularly in relation to fuel storage, industrial operations, and contaminated land. She brings extensive experience in environmental impact assessments, remediation action planning, specialist report review, and translating hydrogeological data into practical risk-based decisions for business and regulators alike.

Liesl has previously chaired various association committees and regularly engages with regulators, consultants, and industry forums on emerging environmental challenges. Her keynote address draws on lessons from both consultancy and industry, offering a pragmatic perspective on groundwater quality assessment, long-term stewardship, and the balance between environmental protection and sustainable development.

INVITED SPEAKER: Nicholas Smith - Attorney And Environmental Law Specialist South Africa

Presentation: Look before you leach: a (pre-)cautionary tale about the likely environmental impacts of proposed in-situ leachate prospecting, test-mining and/or uranium mining in the stampriet transboundary aquifer system in Namibia, and what good governance should oblige in this context

Nicholas Smith is a senior practising attorney specialising in environmental, constitutional and administrative law at Nicholas Smith Attorneys. He has worked exclusively in this specialist field for almost 30 years.

Nicholas has a wide-ranging practice in all areas of environmental law and is an experienced litigator in this field, with significant experience in the various divisions of the South African High Court, in the Supreme Court of Appeal, and in the Constitutional Court.

He has worked in a number of African countries, including Angola, Botswana, Mauritania, Namibia, Lesotho and Swaziland. Nicholas is based in Cape Town, South Africa.

FIELD EXCURSION – Itinerary tbc