PROGRAMME

DAY 1: MONDAY (01/09/2014)

08.30 – 09.30	**REGISTRATION**	
09.30 – 09.40	Welcome: **Prof Ramesh Bharuthram**, Deputy Vice-Chancellor (Academic), University of the Western Cape	
09.40 – 09.50	Opening Statement **Prof Graham Jewitt**, IAHS Country Representative	
09.50 – 10.00	Welcome **Prof Denis Hughes**, IAHS Vice-President	
10.00 – 10.40	Des Midgley Memorial Lecture, **Dr Ronnie McKenzie**, Managing Director, WRP Consulting and Engineers	
10.40 – 11.20	Keynote Speaker, **Prof Mark New**, Director: African Climate & Development Initiative, Pro-VC for Climate Change, University of Cape Town	
11.20 – 11.50	**TEA**	
11.50 – 12.10	Long-term monitoring for hydrological research and training. **Dr Michele Warburton**	
12.10 – 12.30	Water Resources of South Africa (WR2012). **Allan Bailey**	
12.30 – 13.00	Water Research Commission – WR2012 Website Launch	
13.00 – 14.00	**LUNCH**	
	AUDITORIUM 1	*AUDITORIUM 2*
	INTEGRATED WATER RESOURCES MANAGEMENT 1 Chairperson: Isa Thompson	**CATCHMENT HYDROLOGY** Chairperson: Stephen Mallory
14.00 – 14.15	An overview of the Limpopo River Basin Monograph Study. **Enoch Dlamini**	Regional control of hydrological responses to weather forcing in the context of seasonal hydrological forecasting. **Dr Piotr Wolski**
14.15 – 14.30	Long-term surface water balance for the Limpopo River basin. **Dr Nicholas Walker**	An Improved and Consistent Approach to Estimate Catchment Response Time: Case Study in the C5 Drainage Region, South Africa. **Jaco Gericke**
14.30 – 14.45	Application of multiple regression analysis in projecting the water demand for the City of Cape Town. **Crispen Mutsvangwa**	Developing a continuous simulation modelling system for design flood estimation in South Africa using the ACRU model. **Thomas Rowe**
14.45 – 15.00	An operational decision support system for the Western Cape Water Supply System. **Dr Verno Jonker**	Regional Flood Frequency Analysis. **Jermaine Jonathan Nathanael**
15.00 – 15.30	**TEA**	
15.30 – 15.45	Planning for Desalination in the Context of the Western Cape Water Supply System. **Catherine Blersch**	Performance of Regional Flood Frequency Methods in KwaZulu-Natal. **Prof Jeff Smithers**
15.45 – 16.00	The rehabilitation and raising of the Nacala Dam: a hydrological perspective. **Simon Johnson**	Flood Vulnerability and Hazard Indices in KwaZulu-Natal. **Ryan Gray**
16.00 – 16.15	Linking uncertain information and decision making output in water resources allocation. **Gregory Pienaar**	Flood mapping and risks assessment for the Barotse Floodplain, Zambia. **Dr Xueliang Cai**
16.15 – 16.30	The Kagera River Basin: A Framework for the Sharing of Resources. **Erik van der Berg**	Assessing the transmission loss functions of the modified Pitman model applied in a semi-arid ephemeral environment. **Jane Tanner**
16.30 – 17.00	SANCIAHS Meeting	
16.30 – 18.00	**COCKTAIL AND POSTER EVENT** *sponsored by* **IWR WATER RESOURCES**	

DAY 2: TUESDAY (02/09/2014)

	PLENARY SESSION Chairperson: Prof Graham Jewitt	
08.30 – 09.00	Keynote Speaker: **Prof. Kenneth Strzepek**, MIT & University of Colorado, USA	
09.00 – 09.30	Keynote Speaker: **Phakamani Buthelezi**, CEO, Breede-Gouritz Catchment Management Agency	
09.30 – 09.50	The Initiation of a National Flood Studies Programme for South Africa. **Prof Jeff Smithers**	
09.50 – 10.10	Estimates of the impacts of invasive alien plants on water flows in South Africa. **Dr David Le Maitre**	
10.10 – 10.30	Book-ending the potential climate change impacts on precipitation, runoff and irrigation demand across South Africa by 2050: A Hybrid Frequency Distribution (HFD) approach. **Dr James Cullis**	
10.30 – 11.00	TEA	
	AUDITORIUM 1	*AUDITORIUM 2*
	RAINFALL Chairperson: Tinisha Chetty	**HYDROPEDOLOGY** Chairperson: Nebo Jovanovic
11.00 – 11.15	Improving understanding of spatial rainfall variability in Cathedral Peak. **Feroza Morris**	Hydropedological classification of soilscapes in South Africa. **Dr Johan Van Tol**
11.15 – 11.30	Long term seasonal and annual changes in rainfall duration and magnitude in upper reaches of Letaba River Catchment, South Africa. **Prof John Odiyo**	Hydropedological interpretation of ancient and recent soil properties. **Darren Bouwer**
11.30 – 11.45	Characterization of droughts using self-calibrated Palmer's drought severity index in the Modder River basin. **Dr Desalegn Edossa**	Applying soil classification and mapping in hydropedology and hillslope hydrology at all scales. **Prof Pieter Le Roux**
11.45 – 12.00	A Variable Length Block (VLB) Bootstrap Multi-Site Stochastic Rainfall Model with applications to Climate Change. **Prof John Ndiritu**	Hillslope hydropedology in the Cathedral Peak 6 catchment, South Africa. **Dr Bataung Kuenene**
12.00 – 12.15	Accounting for uncertainty in the repair of daily rain gauge records. **Dr Scott Sinclair**	Creating a hydropedological map for a Granite Supersite catchment, Kruger National Park. **Dr George Van Zijl**
12.15 – 12.30	A sensitivity analysis of rainfall record lengths and mean annual precipitation on design rainfall estimation. **Phillip Hull**	A virtual experiment approach to quantify lateral responses of hillslope soils. **Dr Johan van Tol**
12.30 – 13.30	LUNCH	
	URBAN WATER SUPPLY John Odiyo	**HYDROPEDOLOGY** Nebo Jovanovic
13.30 -13.45	The challenges of providing water and sanitation to urban slum settlements in South Africa. **Dr Ephias Makaudze**	Application of hillslope response mechanisms in runoff simulation: results from selected catchments in South Africa. **Prof Simon Lorentz**
13.45 – 14.00	Towards a concept plan to supply bulk water in KwaZulu-Natal. **Mark Summerton**	Assessing hillslope response mechanisms using stable isotopes. **Carl Freese**
14.00 – 14.15	Introduction of Riverbank Filtration System for Water Treatment in South Africa. **Mpafane Deyi**	Pyrohydrology: Effects of Fire Treatments on Soil Hydrology in African Savannas. **Tercia Strydom**
14.15 – 14.30	Projected Impacts of Urbanisation on Hydrological Resource Flows: A Case Study within the Umgeni Catchment, South Africa. **Stefanie Schutte**	Use of multilayer feedforward neural networks for predicting root zone soil moisture. **Rachel Makungo**
14.30 – 14.45		Development of a Design Tool for Determining Contour Bank Intervals. **Robyn Johnson**
14.45 – 15.00	TEA	

DAY 2: TUESDAY (02/09/2014) *(continued)*

	AUDITORIUM 1	*AUDITORIUM 2*
	GLOBAL CHANGE Chairperson: Michele Warburton	**ECOHYDROLOGY** Chairperson: Piotr Wolski
15.00 – 15.15	Understanding uncertainty in rainfall from regional climate model simulations: A hydrological perspective. **Samuel Kusangaya**	Links between flow and river bank lateral vegetation zones. **Martin Kleynhans**
15.15 – 15.30	Assessing the impacts of climate change in the Olifants River catchment in South Africa. **Dr Tendai Sawunyama**	Implementation of the ecological reserve with specific reference to freshette releases from dams. **Stephen Mallory**
	Energy, Agriculture and Urbanisation in the Waterberg: A Hydrological Modelling Case Study on the Water-Energy-Food Nexus. **Prof Roland Schulze**	Land use change and ecological infrastructure – improving hydrological ecosystem service delivery in the uMngeni catchment. **Catherine Hughes**
15.30 – 15.45	Runoff-derived CO2 effluxes in a sub-tropical river basin and potential controls. **Humbelani Thenga**	Potential Impacts of up-scaled Rainwater Harvesting on Ecosystem Goods and Services within the Potshini and Makanya Catchments. **Andrea Simone Chetty**
	GEOHYDROLOGY Chairperson: Wandile Nomquphu	**WATER QUALITY** Chairperson: Nicholas Walker
16.00 – 16.15	Decision Framework for Sustainable Groundwater Use. **Helen Seyler**	Water quality monitoring in the uMngeni catchment: upstream of Midmar Dam. **Sanele Ngubane**
16.15 – 16.30	Improved Quantification of Evaporation Losses From Groenvlei. **Dr Roger Parsons**	The Value of Community-Based Water Quality Monitoring Initiatives. **Sesethu Matta**
16.30 – 16.45	Assessing application of multi-method approach to quantify groundwater-surface water interactions, upper Berg River catchment, South Africa. **Tebogo Madlala**	Metolong Dam? Estimating the potential thermal impacts of water releases prior to construction of the dam. **Nico Rossouw**
16.45 – 17.00	Slug testing of Piezometers in order to calculate the determination of hydraulic conductivity in Mgobezeleni Catchment. **Sakhile Mamba**	An investigation into the effect of climate change on the surface water quality of Voëlvlei Dam with an emphasis on algal growth. **Wageed Kamish**
17.00 – 17.15	The water balance dynamics of Soetendalsvlei, a lacustrine wetland on the Agulhas Plain, South Africa. **Mandy Carolissen**	An assessment of the Water Quality Systems Assessment Model (WQSAM) in the Crocodile River catchment **Andrew Slaughter**
18.30 for 19.00	**CONFERENCE DINNER – BON AMIS RESTAURANT AT BLOEMENDAL**	

DAY 3: WEDNESDAY (03/09/2014)

	AUDITORIUM 1	*AUDITORIUM 2*
	EARTH OBSERVATION APPLICATIONS Chairperson: John Ndiritu	**INTEGRATED WATER RESOURCE MANAGEMENT 2** Chairperson: Mandy Carolissen
08.30 – 08.45	The assessment of satellite daily rainfall data within a monthly-daily flow disaggregation procedure. **Dr Andrew Slaughter**	Assessment of the impact of gauging weir limitations on the estimation of runoff volumes and flood peaks. **Jac Aldous**
08.45 – 09.00	Evaluation of selected remote sensing models of evapotranspiration at sites in the summer and winter rainfall areas of South Africa. **Dr Sebinasi Dzikiti**	Understanding the spatial and temporal variation of Inundation within the Floodplains of the Okavango Delta, Botswana. **Kobamelo Dikgola**
09.00 – 09.15	Validating Earth Observation Products: An Inter-Model Comparison of MOD16 Evapotranspiration and the JAMS/J2000 Hydrological Model. **Dr Richard Bugan**	Re-calibration and validation of a selected yield model for selected biofuel feedstock (sugar beet and sugarcane). **Ofentse Mokonoto**
09.15 – 09.30	Monitoring of water resources using satellite information: Applications of MOD16 evapotranspiration. **Dr Nebo Jovanovic**	Development of tomato pole planter and extractor. **Thohedzo Ndou**
09.30 – 09.45	The use of remote sensing for estimating variations in total evaporation in the uMgeni Catchment. **Cletah Shoko**	Water footprint of selected crops within a semi-arid area; a case study of Olifants/Doring WMA, South Africa. **Sibongile Manamathela**
09.45 – 10.00	Exploring the Potential for using Remote Sensing to Identify Existing Rainwater Harvesting Sites. **Lauren Bulcock**	Comparison of water use by deep rooted alien invasive Prosopis and indigenous Acacia Karroo trees in the Northern Cape province. **Zanele Ntshidi**
10.00 – 10.15	Validation of HYLARSMET. **Dr Scott Sinclair**	Complexities of Streamflow Reductions by Commercial Plantation Forests Under Varying Climatic Scenarios. **Prof Roland Schulze**
10.15 – 11.00	TEA	
	CLOSING SESSION Chairperson: Prof Denis Hughes	
11.00 – 11.20	Feedback from parallel session rapporteurs	
11.20 – 11.45	Future opportunities for South African hydrology. **Wandile Nomquphu and Prof Graham Jewitt**	
11.45 – 12.15	IAHS Scientific Decade 2013-2022 – Panta Rhei Change in Hydrology and Society. **Prof Graham Jewitt & Prof Dominic Mazvimavi**	
12.15 – 12.30	Awards and next Conference	
	Closure	
12.45 – 13.45	LUNCH	