

WISA 2018 DRAFT PROGRAMME

Sunday, 24 June 2018

11:00 - 18:00 Registration and bag collection opens in the Registration Foyer
 Council Meeting Venue to be confirmed
 17h30 - 20:30 Welcome function Exhibition Hall 1,2,3

Monday, 25 June 2018

SESSION 1 Ballroom East & West
 07h00 Registration Opens in the Registration Foyer
 08h30 - 10h45 WISA 2018 Biennial Conference & Exhibition Plenary Session - Key Note Clem Sunter
 10h45 - 11h15 Tea/Coffee break in the Exhibition Hall

Time	Session 1	Session 2	Session 3	Session 4	Session 5	Session 6	Session 7	Session 8	Session 9	Session 10	Session 11
	Ballroom East	Ballroom West	1.41 & 1.42	1.43 & 1.44	1.61 & 1.62	1.63 & 1.64	2.41 - 2.43	2.44 - 2.46	2.61 - 2.63	2.64 - 2.66	Roof Terrace
	Title: Waste Not Want Not Session A	Title: Unchartered Waters	Title: Pooling together	Title: Sink or Swim	Title: Under the Microscope	Title: Waste Not Want Not Session B	Title: WORKSHOP	Title: WORKSHOP	Title: WORKSHOP	Title: WORKSHOP	Title: WORKSHOP
11h15 - 13h00	Reliability Engineering Innovative Solutions to Wastewater Industry: Nganamakabane Ella Mutyaba	The use of Anaerobic Digestion wastewater and off-gas for the cultivation of microalgae Talita Beyl	Towards an integrated and sustainable water resource monitoring framework in South Africa Simphiwe Chabalala	Ending the madness..... Jayant Bhagwan	Prevalence of Haloacetonitriles in a large bulk drinking water system in South Africa Mxolisi Dlamini	Reaction Pathway Analysis for the Degradation of phenol by Advanced Oxidation Process: TiO2 Photocatalysis Using Isotopic Labeling Technique. Lindelwa Jay	"Gazetted Resource Quality Objectives, so what now?" - Golder Associates Lee Boyd	Defining the needs-driven research agenda for mine water - Mine Water Division Jo Burgess	Process Controller Division Workshop WISA (Session 1) Dewald van Staden	A drought's silver lining. Advancing new financing models for water infrastructure - Strategic Water Partners Network Nick Tandi	Effective Governance and support of bilateral cooperation as a means of improving water resource management - Department of Water and Sanitation (Session 1) Eustathia Bofilatos
	Maintenance asset register and asset life cycle maintenance case study Jack Rogers	Evaluation of the effect of infeed ammonium: nitrite ratio on the performance of Anammox reactor Nomalanga Gasa	The consideration and improvement of the sustainability performance monitoring framework for South African water boards Craig Thompson	Development of an on-site domestic grey water treatment and recycle system using crushed bricks and charcoal as treatment medium Joel Kibiyy	Pattern of Use of Sachet Water and Related Antecedent Factors Among Eleyele Residents, Ibadan, Nigeria Rachel Titus	Treatment of winery wastewater using a biological sand filtration system Gareth Holtman					
	The condition of South African water infrastructure - results from the third national infrastructure report card. Kevin Wall	The bioreformation of organic rich waste water into high-purity hydrogen JP du Toit	Effective communication in the local government space – guidelines for sector partners Sarah Slabbert	Opportunities for Greywater Reuse – Risk or Resource? Ross Roberts	Urinary trichloroacetic acid (TCCA) on pregnant women as a biomarker of exposure to drinking water disinfection by-products. A cross-sectional study in Tshwane district, Gauteng province, South Africa. Funanani Mashau	Population dynamics of key functional microbes associated with nutrient removal in different full-scale BNR systems. Oluyemi Olatunji Awolusi					
	Case Study: Lower Thukela Bulk Water Supply Scheme: Design Considerations, Lessons and Challenges Mike Killick	Evaluation of R. palustris for simultaneous wastewater treatment and hydrogen production in a photofermentation process Phillip Uys	"Impact of Governance on Cost of Infrastructure" Nezar Eldidy	Implementation of Shared Water Savings Contract at National Department of Public Works Mr Seamus Levin	Using Total coliforms to Assess the Safety of Drinking Water in Cape Town South Africa During the 2016/17 Drought Period Mjikisile Vulindlu	Influence of pyrolysis gas as reaction atmosphere on sewage sludge pyrolysis product distribution and composition. Peter Osifo					
Lunch	13h00 - 13h45										
	Session 12	Session 13	Session 14	Session 15	Session 16	Session 17	Session 18	Session 19	Session 20	Session 21	Session 22
	Ballroom East	Ballroom West	Meeting Rm 1.41	Meeting Rm 1.42	Meeting Rm 1.61	Meeting Rm 1.62	Meeting Rm 2.41	Meeting Rm 2.42	Meeting Rm 2.60	Meeting Rm 2.62	Roof Terrace
	Title: Waste Not Want Not Session A	Title: Waste Not Want Not Session B	Title: Pooling together	Title: Sink or Swim	Title: Under the Microscope	Title: Bridging the Gap	Title: WORKSHOP	Title: WORKSHOP	Title: WORKSHOP	Title: WORKSHOP	Title: WORKSHOP
	Prediction of waste minimisation and water recovery in the combined membrane and chemical precipitation treatment of mine impacted waters Sebastian Franzsen	Two approaches for the use of CabECO technology in the disinfection of fecal-polluted water Manuel Andres Rodrigo	Hydro-political chess: Lessons in institutional development and the challenge to deliver on key elements of the South African National Water Policy Derek Western	Why behavioural change intervention is a priority at present Jayant Bhagwan	The Qualitative and Quantitative Determination of Estrone in a Waste Water Treatment Plants in South Africa using HPLC- MSMS Sibusiso Mnguni	Bridging The Gap: Sustainable Finance For Improved Delivery Henriettah N Ndlovu					

13h45 - 15h30	Recovery of Calcium Fluoride and Nickel Metal from Stainless Steel Spent Pickling Liquor <i>Jennifer Hardwick</i>	Canary CEMS: The Development and Potential Industrial Application of a CO2 Alarm System for Microbial Respiration Fluctuations <i>Wendy Stone</i>	An Integrated Water Quality Management Plan for the Olifants Water Management Area <i>Lee Boyd</i>	Understanding and affecting water consumer behavior using technological interventions at a primary school in Stellenbosch <i>Cheroline Ripunda</i>	Determination of Pharmaceuticals in the Aqueous Matrix of a Waste Water Treatment Plant <i>Mokgethwa Mashiane</i>	Development of a Cost Management Model for Economic Sustainability of Water Reuse Systems for Potable Applications <i>Abiola Abimbade</i>	Wastewater – tapping into this resource: Emerging Wastewater Treatment options - Water Research Commission <i>John Zvimba</i>	Contextualising the concepts of Water-Wise Cities in Africa - Aurecon <i>Lloyd Fisher-Jeffes</i>	Process Controller Division Workshop WISA (Session 2) <i>Dewald van Staden</i>	WISA - ripples of change <i>Juanita Vorster</i>	Effective Governance and support of bilateral cooperation as a means of improving water resource management - Department of Water and Sanitation (Session 2) <i>Eustathia Bofilatos</i>
	Minimised Waste Production in the Effective Treatment of Scrubber Blowdown Wastewater <i>Carlen Spagnuolo</i>	ORP as a water disinfection control for a dual ionisation-oxidation disinfection process <i>Moletsane Mophethe</i>	The State of Water Conservation and Water Demand Management in KwaZulu-Natal <i>Michael Singh</i>	A focus on water use attitudes and behaviours in South Africa's metropolitan areas: A people-centric approach to urban water conservation and demand management <i>Inga Jacobs-mata</i>	Using nanotechnology to fabricate polyethersulfone nanocomposite membranes for removal of emerging micropollutants from water <i>Elijah Wanda</i>	Energy Consumption Model for Operation and Maintenance Phase of Water Reuse Systems for Potable Applications <i>Abiola Abimbade</i>					
	The treatment of reverse osmosis feed using spent cationic exchange resin. <i>Sabelo Tshabalala</i>	Chlorine Dioxide as an alternative pre-oxidant in the treatment of eutrophic raw water <i>Buks Strydom</i>	Impact of Transboundary Water Cooperation Policy to Small-Scale Farmers: Case of the Emandla Ekuphila Water User District in the Incomati River Basin <i>Dumisani Mndzebele</i>	Causes, lessons learned and recommendations from the artificial drought of 2016-17 in the Caledon-Modder river system <i>Jeremia Jesaja Van Der Walt</i>	Estimating the loads of emerging contaminants and drug abuse within communities using wastewater-based epidemiology: Advances and future recommendations for South Africa <i>Edward Archer</i>	Establishment of a coordinating body in the Upper Olifants Catchment <i>Traci Reddy</i>					

Tea 15h30 - 16h00 **POSTER SESSION**

	Session 23	Session 24	Session 25	Session 26	Session 27	Session 28	Session 29	Session 30	Session 31	Session 32	Session 33
Time	Ballroom East	Ballroom West	Meeting Rm 1.41	Meeting Rm 1.42	Meeting Rm 1.61	Meeting Rm 1.62	Meeting Rm 2.41	Meeting Rm 2.41	Meeting Rm 2.60	Meeting Rm 2.62	Roof Terrace
	Title: Waste Not Want Not Session A	Title: Waste Not Want Not Session B	Title: Pooling together	Title: Sink or Swim Session A	Title: WORKSHOP	Title: In the Pipeline	Title:	Title: WORKSHOP	Title: WORKSHOP	Title: WORKSHOP	Title: WORKSHOP
16h00 - 17h15	Energy Reduction in Membrane Bioreactors – Some Novel Findings. <i>Lingam Pillay</i>	Carbon Footprint Reduction Achieved by Utilising Integrated Fixed Film Activated Sludge <i>Peter Wille</i>	Enabling Communities of Practice: Network Dynamics in Building a Water Sensitive Catchment <i>Andrew Bennett</i>	SMART Meter Reading Service <i>Hajo Heusinkveld</i>	Stakeholder Participation & Communication in the Inkomati-Usuthu Water Management Area - Inkomati-Usuthu CMA <i>Sylvia Machimana</i>	Chemical phosphate removal from Hartbeespoort Dam water with iron <i>Komla Atta</i>	Impacts of drought and required response within the wastewater sector - Water Research Commission <i>John Ngoni Zvimba</i>	How Should WISA Contribute in Alleviating Water Sector Challenges - WISA KZN Branch & Umgeni Water <i>Lindelani Sibiya</i>	FETWATER WORKSHOP <i>WISA Anita Pillay</i>	The most powerful weapon: Introducing initiatives from the education-water sector interface - EWSETA <i>Nora Hanke-Louw</i>	Wetskills Water Challenge - Finals <i>Johan Oost</i>
	Improving Membrane Bioreactor Energy Efficiency by Utilising Integrated Fixed Film Activated Sludge and Tertiary Ultrafiltration <i>Peter Wille</i>	Aeration Blower Upgrades for City of Cape Town <i>John Clayton</i>	Are Water Use Licenses just "Word Salads"? - a Critical Evaluation of WULs against PAJA-requirements. <i>Carin Bosman</i>	Feasibility of advanced and prepaid water metering in South Africa <i>Lilian Ngabirano</i>		Optimization of trickling filter performance <i>Tshepo Motaung</i>					
	Design, Cost & Benefit Analysis of the Proposed Membrane Bioreactor Plant at Zandvliet Wastewater Treatment Works <i>Mpho Ramphao</i>	The impact of strict zero e-coli standards on South African municipal waste water treatment plants <i>Roda Lidzhade</i>	The State of Water Use in the Vaal & Orange Water Management Areas <i>Khutso Mabela</i>	Responsive pipe networks - smart pipes in South Africa <i>Sw Jacobsz</i>		Indigenous Microalgae as Bioremediation Agents for Mine Contaminated Waters <i>Monique Smit</i>					

SESSION 34
17h30 - 19h00 **WISA AGM**

PRIVATE EVENTS

Tuesday, 26 June

SESSION 35

Time	Ballroom East & West										
08h30 - 10h00	PLENARY KEYNOTES: Tony Wong and Samantha Yates										
Tea	10h00 - 10h30										

SESSION 36

	Session 36	Session 37	Session 38	Session 39	Session 40	Session 41	Session 42	Session 43	Session 44	Session 45	Session 46
Time	Ballroom East	Ballroom West	1.41 & 1.42	1.43 & 1.44	1.61 & 1.62	1,63	1,64	2.41 - 2.43	2.44 - 2.46	2.61 - 2.63	2.64 - 2.66
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10h30 - 12h15	Chemical and Microscopic Studies into the Corrosive Effect of Fluoride on Mild Steel <i>Alfonso Palazzo</i>	Evolution of mine water in the Mpumalanga Coalfields <i>David Love</i>	YouKnow! Platform (Youth Driven Knowledge on Water) <i>Aurelia Van Eeden</i>	Stochastically determining end-uses from temperature data loggers <i>Bettina Botha</i>	Challenges and Innovation in the Management of Drinking Water Treatment Residue at Rand Water <i>James Parsons</i>	SAICE Infrastructure report card. <i>Kevin Wall</i>	The use of R Markdown in Water Quality Assessments - CSV Water Consulting Engineers <i>Leanne Coetzee</i>	The use of innovation to create sustainability and resilience in the water sector - Water Research Commission <i>Manjusha Sunil</i>	A unified approach for sediment risk, monitoring and interpretation - Golder Associates Research Laboratory <i>Bridget Shaddock</i>	Governance and Management of the Water Sector - Water Management and Institutional Division <i>Nezar Eldidy</i>	Water Reuse in Southern Africa, addressing the gaps - Rand Water Mthokozisi Ncube
	Evaluation of Butyric Acid degrading bacteria isolated from pit latrine: cell growth studies <i>John Bright Joseph Njalam'mano</i>	The Dewatering Behaviour of Transformed Fe(III) Oxyhydroxide Precipitates Formed From Ferric Sulphate Solutions <i>Cledwyn Mangunda</i>	Community-driven planning and design of water services for multiple uses <i>Virginia Molose</i>	GIS aided pressure analysis to aid water conservation at institutions: a case study of the National University of Science and Technology, Zimbabwe <i>Craig Tanyanyiwa</i>	Single Ion Effects on Bubble-Particle Attachment of Pyrrhotite <i>Lisa October</i>	Affordable digital water monitoring technology: measure to manage <i>Jessica Fell</i>					
	Chemical Oxygen Demand (COD) removal efficiency of an EGSB anaerobic digester treating Poultry Slaughterhouse Wastewater. <i>Yasheemah Williams</i>	Valorisation of leachate from mining using freeze desalination system <i>Nsaka Ntumba</i>	Analysis of the Water Education and Training skills development in the South African water sector <i>Agnes Maenhout</i>	Decision Enhancement for the Management of Apparent Water Losses <i>Mthokozisi Ncube</i>	A comparison study of the adsorption of metal ions by chitosan derivatives in a synthetic media <i>Ephraim Igberase</i>	Applying the Internet of Things to water and wastewater infrastructure monitoring <i>George Gerber</i>					
	A household urine collection device to save water and produce fertilizer <i>Dyllon Randall</i>	Predicting Post-closure Seepage to Optimise Rehabilitation Options for Tailings Facilities with Limited Soil Cover Material <i>Albert Van Zyl</i>	Capacity building through the Framework Programme for Research, Education and Training in the water sector <i>Moses Mukota</i>	Assessment of Water Distribution System Infrastructure and Development of Water Efficient Strategies for National Government Department Large Facilities <i>Seamus Levin</i>	Continuous Ion Exchange for Effective Water Recovery from the Wastewaters of a Coal-Fired Power Station <i>Carien Spagnuolo</i>	Pipe condition assessment device for assessing the condition of pressurized water pipelines <i>Rene Nsanzubuhoro</i>					

Lunch 12h15 - 13h15

	Session 49	Session 50	Session 51	Session 52	Session 53	Session 54	Session 55	Session 56	Session 57	Session 58	Session 59
Time	Ballroom East	Ballroom West	Meeting Rm 1.41	Meeting Rm 1.42	Meeting Rm 1.61	Meeting Rm 1.62	Meeting Rm 1.63	Meeting Rm 2.41	Meeting Rm 2.42	Meeting Rm 2.60	Meeting Rm 2.62
	Title: Waste Not Want Not	Title: Unchartered Waters	Title: Pooling together	Title: Sink or Swim	Title: Under the Microscope	Title: In the Pipeline	Title: WORKSHOP	Title: WORKSHOP	Title: WORKSHOP	Title: WORKSHOP	Title: WORKSHOP
13h15 - 15h00	Genetic impacts of acid mine drainage on human HEPG2 liver cells: a case study in South Africa <i>Maronel Steyn</i>	Modelling biofilm structure and micropollutant removal using an individual-based model <i>James Kuan</i>	Addressing a water crisis: A Rand Water initiative <i>Nyree Steenekamp</i>	Implementing water sensitive design (WSD) using 'the water management hierarchy': a South African university campus case study <i>Benjamin Biggs</i>	Understanding industrial effluent water quality: What is the norm and Why we need to do better? <i>Genevive Harding</i>	Quantifying the costs and benefits of Nature Based Solutions for water supply <i>Graham Jewitt</i>	Citizen Science - Crowd sourced Water Research - Young Water Professionals WC Division <i>Johan Kilian</i>	Streamlining institutions to test, demonstrate and implement new water innovations and solutions - Water Research Commission <i>Shanna Nienaber</i>	Making a splash: How WISA can strengthen the social compact within the water sector? - WISA Water Science Division (Session 1)	Governance and Management of the Water Sector - Water Management and Institutional Division <i>Nezar Eldidy</i>	Water Reuse in Southern Africa, addressing the gaps - Rand Water
	An approach to energy recovery from wastewater in pharmaceutical industry: A wastewater beneficiation case study <i>Liam Kay</i>	VukModelling Poly phosphate Release During Anaerobic Digestion of Sludge from Nutrient Removal Systems <i>Vukuthu Maake</i>	Low cost green technology for domestic wastewater treatment for reuse and beneficiation <i>Paul Oberholster</i>	Addressing challenges and opportunities for implementing Water Sensitive Design in South Africa <i>Kirsty Carden</i>	Recent advances in global bacteriological water quality monitoring <i>Caitlin Rodgers</i>	Urinals for Women and Girls: Harvesting urine from the other half of South Africa's population <i>Janette Neethlin</i>					
	The effects of the recent drought in the operation and the management of water treatment processes and the product quality at Umgeni Water. Sibusiso Mdunde	A plant-wide evaluation of the Benchmark Simulation Model No.2P (BSM2P) for wastewater treatment systems: resource consumption and recovery using steady state and dynamic simulation models. <i>Muhammad Imraan Paleker</i>	The status and extent of de facto water reuse (unplanned potable reuse) in South Africa <i>Chris Swartz</i>	Using a diagnostic indicator assessment to understand sustainability transitions towards Waster Sensitive Design in the City of Cape Town <i>Boipelo Madonsela</i>	Optimisation opportunities for combined water quality monitoring programmes for water services providers and water service authorities <i>Liee L</i>	Targeting efficient use of transferred Orange River water to the Eastern Cape Province <i>Erik Van der Berg</i>					

	Water reuse in the mining industry is the 'new gold' - The BRPM case study <i>Jeremia Jesaja Van Der Walt</i>	Primary sedimentation modelling with characterized settling velocity groups <i>Christian Leprince Polorigini</i>	Disinfection of treated municipal wastewater effluent considered for indirect reuse: a case study <i>Werner Rössle</i>	Resource guidelines for domestic rainwater harvesting in South Africa <i>Jean-marc Mwenge Kahinda</i>	Lessons Learnt on implementation of Real-time online River Water Quality Monitoring System <i>Londiwe Satimburwa</i>	Rapid detection of microbiological contamination by measurements of specific enzymatic activity – Results after 4 years of validations and experiments in different applications. <i>Wolfgang Vogl</i>					
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Tea 15h00 - 15h30 **POSTER SESSION**

	Session 62	Session 63	Session 64	Session 65	Session 66	Session 67	Session 68	Session 69	Session 70	Session 71	Session 72
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Time	Ballroom East	Ballroom West	1.41 - 1.42	1.43 - 1.44	1.61 & 1.62	1.63 & 1.64	2.41 - 2.43	2.44 - 2.46	2.61 - 2.63	2.64 - 2.66	Roof Terrace
	Title: Waste Not Want Not	Title: Unchartered Waters	Title: Pooling Together	Title: Sink or Swim	Title: Under the Microscope	Title: Bridging the Gap	Title: WORKSHOP	Title: WORKSHOP	Title: WORKSHOP	Title: WORKSHOP	Title: WORKSHOP
	Coal Mine Pit Lakes in South Africa <i>Andrew Johnstone</i>	Brominated flame retardants (BFRs) in sludge samples from Gauteng South: influence of physiochemical properties on concentrations and distributions Tlou Chokwe	A decade of graduate development in the Department of Water and Sanitation: progress, successes, and lessons learned <i>Verena Meyer Singh</i>	Ekurhuleni infrastructure delivery programme (EIDP) feasibility study: wastewater reclamation programme <i>Charl van der Walt</i>	Using R open source software to find hidden relationships in data sets and how this can be used to manage drinking water quality <i>Leanne Coetzee</i>	Opportunities in Wastewater Reuse: A Development Bank Perspective <i>Ncube Mthokozisi</i>					
	Waste Water Treatment Challenges at Coal Fired Power Stations <i>Terence Iyer Abboo</i>	Monitoring cyanobacteria and pollution in dams using satellite remote sensing <i>Mark Matthews</i>	Water problems: Water scarcity and human health in South Africa <i>Kevin Harding</i>	Managing urban water supply systems using free-market economy approaches: A detailed review of the implications for developing countries <i>Claudious Chikozho</i>	Data analysis for enhanced control of water and wastewater treatment processes: taking monitoring into the 21st century <i>Nelius Coomans</i>	A Comparative Analysis of Water and Energy Sector Regulatory Frameworks: Interventions for the Promotion of Private Sector Investment <i>Tafadzwa Mukwena</i>	Accelerating the adoption of new technology solutions - Global Water Technology Innovation Forum Taster Session - Isle Utilities <i>Fiona Griffith</i>	Making sense of the drinking water microbiome - University of Pretoria <i>Fanus Venter</i>	Making a splash: How WISA can strengthen the social compact within the water sector? - WISA Water Science Division (Session 2) <i>Ayesha Laher</i>	Governance and Management of the Water Sector - Water Management and Institutional Division <i>Nezar Eldidy</i>	Limitations and Challenges of Groundwater use by the commercial sector in the Western Cape - AHL Water <i>Ayesha Laher</i>
15h30 - 17h15	Novel Multi-Walled Carbon Nanotubes-Polyvinylidene Fluoride (MWCNT-PVDF) Membranes for Desalination by Membrane Distillation: Synthesis and Application Performance <i>Edgar Mapunda</i>	Up-scaling of bacteria as a treatment of wild toxic cyanobacterial isolates <i>Luyanda Ndlela</i>	Constructing Urban Ecologies: Sustainable Stormwater Infrastructure as Community Space <i>Julia McLachlan</i>	Effects of Reduction of Wastewater Volumes on Sewerage Systems and Wastewater Treatment Plants <i>Gina Pocock</i>	A Review of Life Cycle Management Studies in the Water Sector for South Africa <i>Taahira Goga</i>	Southern African Development Community (SADC) Economic Accounting for Water (EAW) Methodologies: can they be effectively applied in the Komati system to ascertain the economic benefit of water supply to riparian states? <i>Dumsani Mndzebele</i>					
	Treatment of Brine for the Recovery of Drinking Water, Calcium Carbonate and Sodium Sulphate <i>Johannes Maree</i>	Towards the backfilling of old mines with power station and gasifier ash: an elegant solution to two major environmental problems <i>David Love</i>	Moving beyond the 'Farm Gate': Embedding Water Stewardship in the Western Cape's Commercial Horticulture Sector <i>Nora Lanari</i>	Point-of-use water treatment for un-serviced communities – The VulAmanz Option <i>Lingam Pillay</i>	Enhanced Water Quality Management via a Novel Rapid Microbiological Field Testing Strategy. <i>Dave Tracey</i>	Identification of existing and potential green water and wastewater treatment technologies for the creation of green occupations in the Western Cape and Gauteng provinces. <i>Janet Mabuza</i>					

SESSION 69
WISA GALA DINNER Hall 9, CTICC 2

Wednesday, 27 June

SESSION 70

Time	Ballroom East & West										
08h20 - 10h15	PLENARY KEYNOTES: Dhesigen Naidoo and Sunita Narain										
Tea	10h15 - 10h45										

	Session 71	Session 72	Session 73	Session 74	Session 75	Session 76	Session 77	Session 78	Session 79	Session 80	Session 81
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	Title: Waste Not Want Not	Title: Unchartered Waters Session A	Title: Pooling Together	Title: Sink or Swim	Title: Under the Microscope	Title: Unchartered Waters Session B		Title: WORKSHOP	Title: WORKSHOP	Title: WORKSHOP	Title:

10h45 - 12h30	Case Study: Reclamation of high strength industrial effluents through Plate and Frame Reverse Osmosis Technology. <i>Jenna Harris</i>	Removal of carbamazepine from aqueous solution with Zeochar, a zeolite-biochar composite. <i>Johann Kilian</i>	The Power of Exchange: Learn and Train yourself and .. each other <i>Johan Oost</i>	Aerobic Granular Sludge in South Africa: Applying lessons learned from full-scale applications across 5 continents <i>Tim Fisher</i>	Dewatering of Wastewater Sludge: Improvements in Monitoring Techniques at Mitchells Plain WWTW, Cape Town <i>Zaheer Ortell</i>	Water Risk and Strategy Analysis – Aligning Water Strategies to Business Strategies <i>Joanne Crimes</i>	Decentralised Water Technologies – Solutions for Peri-Urban Communities and Water-Sensitive Design? - Stellenbosch University <i>Gideon Wolfaardt</i>	The complex challenges of managing South Africa's problem-sheds - a way forward - Wits University School of Governance <i>Muller Mike</i>	4th industrial revolution: The water sector of the future - Danish Emabssy <i>Suvritha Ramphal</i>	No Drop Certification: Overview of the 2017-2018 No Drop Audits and No Drop Guideline - Department of Water and Sanitation <i>Moloko Raletjena</i>	The Future of Sustainable Sludge Disposal - AECOM <i>Samista Jugwanth</i>
	Utilizing Ozone, UV and AOP for safe water supply in South Africa <i>Steffen Ruting</i>	The optimization of adsorption parameters on the removal of hexavalent chromium by acrylic acid-grafted Macadamia nutshells <i>Themba Ntuli</i>	Wetskills Water Challenge – An innovative approach on experimental learning and networking for Young Water Professionals and students <i>Johan Oost</i>	Integration of Decentralised Waste Water Treatment Plants within City Boundaries - The Psychological Footprint <i>Peter Wille</i>	Influence of pyrolysis gas as reaction atmosphere on sewage sludge pyrolysis product distribution and composition <i>Katlego Mphahlele</i>	Economic risks associated with declining water quality due to urbanization: The Breede River Catchment, South Africa as a case study <i>Annabel Horn</i>					
	Commissioning and initial operational experiences at a new direct reuse demonstration plant <i>Megan Schalkwyk</i>	Point of Use water treatment through use of activated carbon and geotextile layered within an intermittent slow sand filter <i>Stephen Siwila</i>	Water Sector Skills Supply-Demand Forecasting in Local Government <i>Ashwin Seetal</i>	South African Urban Wastewater Challenges: A System Analysis <i>Rejoice Malisa</i>	Use of Solar Thermal Energy for the Drying of Faecal Sludge <i>Santiago Septien Stringel</i>	The consequences of inaction: Hartbeespoort Dam, an escalating hypertrophic impoundment! <i>Frederick Botha</i>					
	Ultraviolet disinfection options for greywater reuse <i>Samantha Van Staden</i>	Clinoptilolite - Polymer Composite for removal of Chromium (IV) and Vanadium (V) from aqueous solution <i>Nomcebo Mthombeni</i>	Novel and Innovative Programme for Fast Tracking Professional Registration of Engineers at Umgeni Water <i>Naheen Toolsee</i>	Accelerating the adoption of new technology solutions <i>Fiona Griffith</i>	Improving the sludge quality of Carl Grundling wastewater treatment works therefore preventing contamination of underground water through sipage. <i>Mmathapelo Rosina Maila</i>	Organic toxicants contamination and aquatic toxicity of The Jukskei River. <i>Mpho Makofane</i>					

Lunch	12h30 - 13h30									13h00 - 13h30: South African Young Water Professionals Annual General Meeting
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Time	Session 82	Session 83	Session 84	Session 85	Session 86	Session 87	Session 88	Session 89	Session 90	Session 91	Session 92
	Ballroom East	Ballroom West	1.41 - 1.42	1.43 - 1.44	1.61 - 1.62	1.63 - 1.640	2.41 - 2.43	2.44 - 2.46	2.61 - 2.63	2.64 - 2.66	Roof Terrace
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	Prediction of nanofiltration rejection performance in brackish water reverse osmosis brine treatment processes <i>Ricky Bonner</i>	Understanding the Hydrology of Constructed Wetlands: An Application of Computational Fluid Dynamics <i>Jasper Christie</i>	Current Regulatory Instruments for Waste Disposal Facilities in South Africa: A Review of the Legislation <i>Tefo Chabedi</i>	Waste water biorefineries: towards resource efficiency. Sue Harrison	Amazing Aquifers of Cape Town: A case study of the Groundwater quality assessment in Cape Flats and Table Mountain Group Aquifers <i>Shane Nethenzheni</i>						
	Fouling resistance analysis of commercial ultrafiltration and reverse osmosis membranes using starch production industrial wastewater effluent <i>Ephraim Igberase</i>	The application of Geomorphons to hydrological response modelling: a case study in the Central Drakensberg, South Africa <i>Jonathan Atkinson</i>	Process Capability Assessments for potable Water Treatment Plants: A Rand Water experience <i>Sifiso Sambo</i>	The First Steenbras Dam: A temporary but pragmatic resolution of Cape Town's water crisis 100 years ago. <i>Kevin Wall</i>	Lower Limpopo Basin Climate Resilience Project <i>Abri Vermeulen</i>						
	Defects in the active layer of ceramic nanofiltration membranes: A facile characterization approach. <i>Moyo Welldone</i>	Evaluation of the performance of flow gauging structures on the Klip River in Johannesburg <i>Zainab Metedad</i>	Comparison between the South African Catchment Management Strategy and the Dutch new Environmental Strategy Programme <i>Hans Waals</i>	Management of storm water inflow in semi-arid cities: South African perspective <i>Rubavathy Noelene Govender</i>	Early warning tool for municipal water supply schemes <i>Louise Dobinson</i>	Bulk Chemical Contract Management and Risk Mitigation - Rand Water <i>Mathabo Gamede</i>	FETWATER WORKSHOP WISA	Consultancy Industry: Action to assist the problem of failing wastewater treatment plants in South Africa and getting our drinking water quality back up to standard - Golder Associates (Africa) Pty Ltd <i>Ralph Heath</i>		2017 Blue Drop and Green Drop Requirements - Department of Water and Sanitation <i>Rodney M Mathebula</i>	Disruptology™: turning disruptive threats into opportunities for success - Water Management and Institutional Division <i>Juanita Vorster</i>
	Reducing the environmental impact of desalination: Current innovations and opportunities. <i>Elspeht Grahm</i>	Using real-time demand patterns to improve hydraulic modelling accuracy in water reticulation networks <i>Carlo Loubser</i>	Analysis of green jobs and practices in wastewater management: A case study of Northwest and Northern Cape provinces <i>Benton Otieno</i>	The effects of the recent drought in the operation and the management of water treatment processes and the product quality at Umgeni Water	Modelling pressure - leakage response in water distribution systems considering leak area variation. <i>Asaph Mercy Kabaasha</i>						

	Ballroom East			
15h45 - 17h00	CLOSING ADDRESS - THE WAY FORWARD	Ballroom East		
17:00 - 18:00	Farewell Reception	Clivia / Jasminium		

Thursday, 28 June

08h00 - 16h00 Technical Tours