

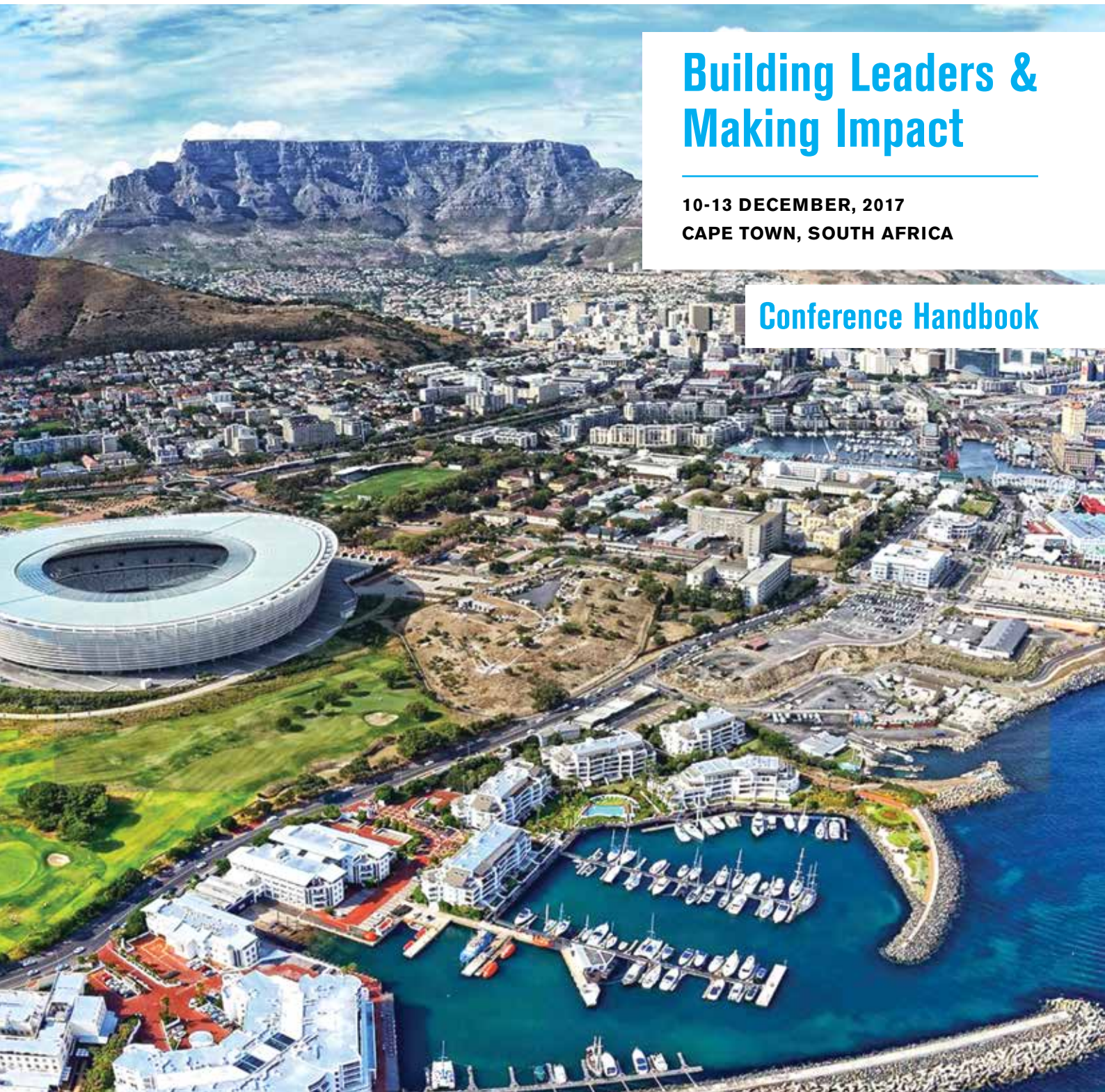
8th International Young Water Professionals Conference



Building Leaders & Making Impact

10-13 DECEMBER, 2017
CAPE TOWN, SOUTH AFRICA

Conference Handbook



EWSETA IS PASSIONATE ABOUT ARTISAN DEVELOPMENT

EWSETA is the SETA mandated to respond to two of the country's most critical resources – Energy and Water. With resource challenges being experienced in both these sectors as a result of growing demand, the relevance of EWSETA careers cannot be over-emphasised. The severe lack of technical skills or artisans in the country is one we take very seriously and through a number of projects we are driving the development of artisans in both sectors across the country. Our sector desperately needs qualified electricians, welders, fitters and turners, plumbers and millwrights (Electromechanicians).



ENERGY AND WATER SECTOR EDUCATION AND TRAINING AUTHORITY

If you are a young person at the point of making an informed decision about your future career, deciding on becoming an artisan will be one of the best decisions you make and it all starts with selecting Maths and Science at school. You also have a number of routes you could take to becoming an artisan – here are a few:

ROUTE 1: APPRENTICESHIP

Through an employer advertisement, you can apply and become an employee (provided you meet the minimum criteria of having a Grade 9 with Maths and Science). Through a contract entered into with EWSETA, the employer can enrol you on an apprenticeship programme combining on-the-job training and modular-based training at a TVET institution which will culminate in a Trade Test.

ROUTE 2: LEARNERSHIP

By registering with the Department of Labour at a labour centre you will be eligible for selection by an employer for a Learnership combining on-the-job and theoretical training (usually 2 – 3 years depending on the trade) which will culminate in a Trade Test.

ROUTE 4: SKILLS PROGRAMMES/ PART QUALIFICATIONS

If you are employed, you could approach your employer to assist in placing you in Skills Programmes, which are short courses and ideally modular or unit standard building blocks towards a full Artisan Qualification. Once you have completed a full house of skills programmes / part qualifications, like the other three routes, it will culminate in a Trade Test.

ROUTE 3: RECOGNITION OF PRIOR LEARNING (RPL)

If you are already skilled in a certain trade but do not have a qualification, you can apply to be assessed (at a cost) through one of EWSETA's accredited Service Providers who will assist with your assessment. Through the RPL process, the Service Provider will assess your competencies and gaps in your skills profile and assist you in closing those gaps through specific training.

CONTACT US:

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 <https://vimeo.com/iwahq> | www.iwa-connect.org

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Welcome Notes



WELCOME FROM THE CONFERENCE CHAIR

Welcome to the 8th IYWPC! This conference has, at the last count, brought together over 400 water, environment and related young professionals from over 50 countries!

This IYWPC is the first to be held in the Global South, which has been organised through extensive collaboration between the YWP-ZA, WISA and the IWA. The Conference Organising Committee have aimed to ensure that the conference is about 'Building Leaders & Making an Impact' for the global water sector. The programme, in my opinion, offers world class keynotes, diverse workshops, innovative learning sessions, high quality technical papers, networking sessions (e.g. the 'Water Olympics' and conference Gala Cocktail party), capacity development sessions (e.g. the 'speed date your employer' Career Fair / Ethical Leadership sessions), and a selection of exciting Technical Tours.

I would like to take this opportunity to thank every YWP (see Page 36 – committees page) from South Africa and across the world who volunteered – in the Local Organising and Programme Committees – significant amounts of their time, and in some cases their money, to help make this conference a success. Without your sacrifices, this conference would not have been possible!

Lloyd Fisher-Jeffes
Conference Chairperson



WELCOME FROM THE PROGRAMME CHAIR

Welcome to the 8th IYWPC! We have tried to do things differently this time, to build our leaders and showcase our impact. We have a balance between technical platform presentations, workshops, learning sessions, panel discussions, career fair, and keynote presentations, and we are introducing our 2-Minute Thesis competition to give everyone an opportunity to present their work at an international conference.

In order to build capacity in our future leaders and to showcase impact, we ran a series of pre-conference webinars and provided internal feedback for papers, presentations, 2-Minute Thesis slides and posters to support you to do your best.

A huge thanks to the Programme Committee, the Advisory Committee, our Reviewers, and to YOU, our delegates, for volunteering your precious time and effort in making this conference a massive success! We could not have done this without you!

Ashton Maherry
Programme Chair

Welcome Notes



WELCOME FROM YWP-ZA

It is with great pride that the South African Young Water Professionals (YWP-ZA) hosts the 8th International YWP Conference in Cape Town.

International conferences such as this one allow South African YWPs to get **exposure** to the exciting activities happening at an international level. In my experience, the African continent, and especially its youth, can be underrepresented in and disconnected from global platforms. The 8th IYWP Conference turns this on its head so that as hosts, South Africans will be able to **showcase** their outstanding contributions to the water world.

The **global networks** emerging from the 8th IYWPC are also increasingly important to solve wicked challenges, such as climate change, which play out globally but require local champions with an international view.

Finally, I hope the South African YWPs will make many friends, find inspiration, and have fun throughout this week!

Nora Hanke-Louw
National Chairperson 2016-2018, South African Young Water Professionals (YWP-ZA)



WELCOME FROM THE IWA

To ensure a sustainable water future, we need pioneers, innovators and cross-sectoral leaders. Yet the sector faces tremendous capacity shortages, and skills gaps, to deliver this goal.

In many countries, the lack of adequate human capacity is the most important inhibiting factor for progress. We're faced with an ageing workforce while simultaneously seeing a rising demand for water professionals. This is further undermined by a lack of adequate planning, education and training to deliver on this growing need.

Change though, is possible. We can drive more professionals to enter the water and related sectors, and provide accessible and affordable professional development opportunities. This IYWPC is one way the International Water Association contributes towards this positive change.

This conference will help you update your knowledge, gain new skills, and develop a personal and professional network. I'm sure it will stimulate your passion and enthusiasm. I can testify that working in the water sector, in academia, research centers or utilities, can bring with it a wonderful professional life; and the future water challenges we will face, while difficult, should only increase our interest in working in the sector. Enjoy this conference, and the opportunities it brings to exchange ideas and to develop your networks. Both will last for years!

Diane D'Arras
President, International Water Association

Welcome Notes



WELCOME FROM WISA

As we approach this conference we acknowledge that we face some serious water sector issues, globally and locally, and we know that the traditional mitigations are largely proving ineffective. We are trading in a “business unusual” environment, where doing the same things as done in the past will not bring us the new solutions we require.

It is with this background that we look to YWPs, and this conference, for fresh perspective. You have the **technological proficiency** and pick up skills so much faster than some co-workers, that we would be fools to not utilise them. WISA membership statistics show a remarkably **high level of diversity and education** amongst our YWP members; you will soon be the most educated generation within the water sector, creating a ripple effect which will last long into the future. Your constant **need for change** is what we need to resist the status quo, which is a problem facing our current environment; it results in much-needed challenges to **traditional corporate structures**. **Multitasking** is undeniably useful, and much needed to address our current issues; you multitask as if you were born for it! Our YWPs teach us to **not be complacent**, because you do not settle for anything, and constantly strive for improvement.

We look forward to your fresh insight and guidance, and know that this conference and your interactions will provide meaningful alternatives to our current situation.

Dr Lester Goldman
CEO, Water Institute of Southern Africa



The future is in your hands

Global engineering and infrastructure company Aurecon is proud to support the 8th International Young Water Professional Conference in Cape Town.

With water security amongst the top 5 global risks according to the World Economic Forum, each of you are no doubt aware of your role in finding sustainable solutions to current global challenges.

Aurecon has a long history of inspiring solutions to water challenges by providing excellent technical capabilities in the water sector and related services.

We look forward to using our expertise to empower the future global leaders of water engineering.

For more information contact

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or visit **www.aurecongroup.com**



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Water resources
management



Scan the QR code to read the article 'What happens if our taps run dry' on our forward-thinking blog, **Just Imagine**. To subscribe to our blog visit **justimagine.aurecongroup.com**

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*Bringing ideas
to life*

Sponsors and Exhibitors

The IYWPC would like to express its sincere appreciation to our sponsors and exhibitors for their generous support.

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EXHIBITORS



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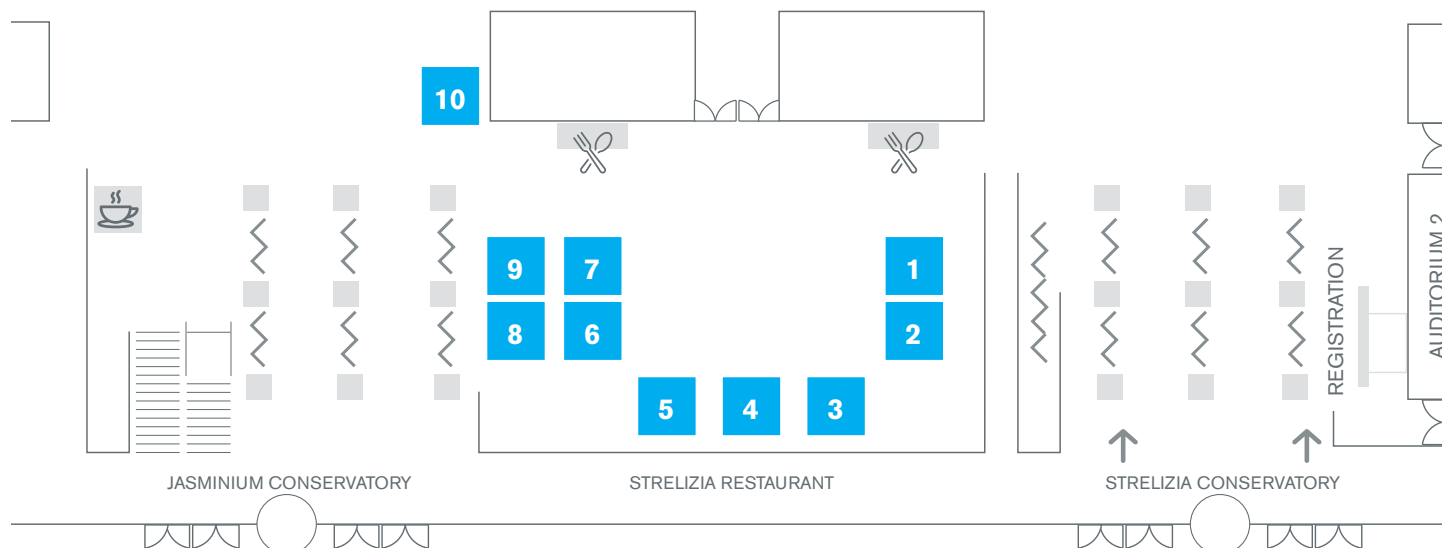


RAND WATER




Exhibition Floor Plan

to the conference



KEY

- | | |
|---|---|
| 1 International Water Association | 6 Energy and Water Sector Education and Training Authority |
| 2 Water Institute of Southern Africa | 7 Rand Water |
| 3 Future Water | 8 Full scholarships for water studies (BSc, MSc, PhD) in Hungary |
| 4 Monash South Africa | 9 GreenMatter |
| 5 Umgeni Water | 10 Water Research Commission |

 Tea and Coffee

 Catering

 Posters

EXHIBITION HOURS:

Monday, 11 December	10:20 – 17:00
Tuesday, 12 December	08:00 – 17:30
Wednesday, 13 December	08:00 – 15:30

Water is the source of life.



Now think of the millions of people that don't have any. We are doing our bit. Are you?

It is a known fact that the earth's temperature is increasing steadily. As a consequence, we will be faced with more extreme weather conditions meaning heavier rains, wetter wet periods and prolonged dry seasons with increased temperatures. This will in turn place an amplified stress on our water resources. If we do not strengthen our efforts now to conserve water, there might not be any left to sustain us in the future.

For more information contact us on
0860 10 10 60 or visit **www.randwater.co.za**



RAND WATER



About the Programme

Schedule at a Glance

PRE CONFERENCE | DAY 1 | SUNDAY, 10 DECEMBER 2017

09:00 - 12:00	REGISTRATION
12:00 - 17:00	● PRE-CONFERENCE NETWORKING @ THE WATER HUB

DAY 2 | MONDAY, 11 DECEMBER 2017

07:30 - 08:30	REGISTRATION (Oral presenters to upload their presentation in respective venues before 08:00)			
08:30 - 10:30	● OPENING PLENARY: WELCOME AND PANEL ON WHAT SHOULD OUR WORLD LOOK LIKE IN 2050?			
10:30 - 10:50	BREAK AND POSTER SESSION ONE			
	AUDITORIUM 2	MR 1.60	MR 2.61 - 2.63	MR 2.64 - 2.66
10:50 - 12:40	● RESOURCE RECOVERY AND REUSE	● WATER TREATMENT	● ADDRESSING GAPS TO ATTAIN WATER SECURITY	● SECURING BASIC NEEDS VERSUS SUSTAINABILITY
12:40 - 13:30	LUNCH AND POSTER SESSION ONE			
	AUDITORIUM 2	MR 1.60	MR 2.61 - 2.63	MR 2.64 - 2.66
13:30 - 14:55	● RESOURCE RECOVERY AND REUSE: INDUSTRIAL WASTEWATER	● FUTURE WATER CITIES IN DROUGHT	● AGAINST THE FLOW: ENGAGING CITIES UTILITIES AND INDUSTRIES IN WRM	● WATER AND AGRICULTURE
14:55 - 15:20	BREAK			
	AUDITORIUM 2	MR 1.60	MR 2.61 - 2.63	MR 2.64 - 2.66
15:20 - 17:10	● ENVIRONMENTAL WATER QUALITY	● DEVELOPING FACILITATION SKILLS	● DEVELOPING SUCCESSFUL PROPOSALS: GRANTS AND FUNDS	● ORGANISING FOR THE DEVELOPMENT OF RESILIENT WATER NETWORK
17:10 - 17:30	CONFERENCE PHOTO			

DAY 3 | TUESDAY, 12 DECEMBER 2017

07:30 - 08:30	REGISTRATION (Oral presenters to upload their presentation in respective venues before 08:00)			
08:30 - 09:30	● MORNING PLENARY: UTILITIES IN WATER-WISE CITIES			
09:30 - 10:00	BREAK AND POSTER SESSION TWO			
	AUDITORIUM 2	MR 1.60	MR 2.61 - 2.63	MR 2.64 - 2.66
10:00 - 11:50	● OPTIMISATION OF WATER AND SANITATION SERVICES	MEETING ROOM	● PERSONAL LEADERSHIP: THE DETERMINANT FOR EFFECTIVE MANAGEMENT	● CREATING WATER-WISE CITY CHAMPIONS
11:50 - 12:50	LUNCH AND POSTER SESSION TWO			
	AUDITORIUM 2	MR 1.60	MR 2.61 - 2.63	MR 2.64 - 2.66
12:50 - 14:20	● WATER QUALITY AND HEALTH	● EWSETA CAREER FAIR ROUND ONE	● ETHICAL LEADERSHIP IN THE WATER SECTOR	● LINKING ASPIRING ENVIROPRENEURS TO THE BUSINESS OPPORTUNITIES OF THE WATER SECTOR
14:20 - 14:45	BREAK			
	AUDITORIUM 2	MR 1.60	MR 2.61 - 2.63	MR 2.64 - 2.66
14:45 - 16:35	● WATER RESOURCES MANAGEMENT	● EWSETA CAREER FAIR ROUND TWO	● A 25-HOUR DAY - TIME MANAGEMENT STRATEGIES	● UNDERSTANDING WATER SECTOR INNOVATION; WHERE, HOW AND WHY
16:45 - 17:30	● AFTERNOON PLENARY: CAREER FAIR PANEL			

KEY	● Cities of the Future	● Basins of the Future	● Water and Sanitation Services	● Networking	● Professional Development
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Schedule at a Glance

DAY 4 WEDNESDAY, 13 DECEMBER 2017				
07:30 - 08:30	REGISTRATION (Oral presenters to upload their presentation in respective venues before 08:00)			
08:30 - 09:00	● MORNING PLENARY: ECONOMICS, SO CALLED NATURE BASED SOLUTIONS AND UNCERTAINTY			
	AUDITORIUM 2	MR 1.60	MR 2.61 - 2.63	MR 2.64 - 2.66
09:00 - 10:50	TWO MINUTE THESIS COMPETITION	● WATER GOVERNANCE	● SKILLS TO WORK ACROSS SILOS AND COMMUNICATE WITH THE PUBLIC	SIDE MEETING. REFER TO PAGE 31
10:50 - 11:20	BREAK AND POSTER SESSION THREE			
	AUDITORIUM 2	MR 1.60	MR 2.61 - 2.63	MR 2.64 - 2.66
11:20 - 12:45	TWO MINUTE THESIS COMPETITION	● WASTEWATER INFRASTRUCTURE (1)	● PRACTICAL APPLICATION OF QUALITATIVE & QUANTITATIVE RESEARCH METHODS	NO SESSION
12:45 - 13:45	LUNCH AND POSTER SESSION THREE			
	AUDITORIUM 2	MR 1.60	MR 2.61 - 2.63	MR 2.64 - 2.66
13:45 - 15:25	TWO MINUTE THESIS COMPETITION	● WASTEWATER INFRASTRUCTURE (2)	NO SESSION	SIDE MEETING. REFER TO PAGE 31
15:30 - 16:45	CLOSING PLENARY			
19:00 - 23:00	● GALA COCKTAIL FUNCTION @ ATLANTIC IMBIZO			
DAY 5 THURSDAY, 14 DECEMBER 2017				
07:30 - 13:00	TOURS			
07:30 - 13:00	TABLE MOUNTAIN DAMS TOUR			
09:00 - 13:00	ROBBEN ISLAND HISTORY OF WATER INFRASTRUCTURE TOUR			

INSTRUCTIONS FOR SPEAKERS AND POSTER PRESENTERS

ORAL PRESENTERS

On the day of your presentation, please ensure that you deliver your presentation to the technical desk at the back of the venue in which you are presenting by 08:00. Audio-Visual (AV) technicians will be available from 07:00 daily and will assist you with uploading it. It is your responsibility to check that your presentation is compatible with the venue equipment and works as you intend it to. Thereafter, it is compulsory for you to attend a speaker briefing at 08:00 in the same venue where you will meet your session chair and understand how the timing and AV and IT procedures will work.

POSTER AND TWO MINUTE THESIS PRESENTERS

Posters will be displayed for one day only according to order of sessions (Monday: Poster Session One; Tuesday: Poster Session Two; Wednesday: Poster Session Three). On the day of your session, please alert the conference staff that you have a poster and you will be guided to where to display it. Conference staff will provide you with fixative to mount your poster to the board. At the end of the day you will need to come and pick up your poster.

Certain batches of posters will be highlighted during each break period, as indicated in the conference programme. Please take note of when your poster session is happening and stand near your poster during the break and be sure to interact with people interested in your work.

Please supply your single slide for your Two Minute Thesis Presentation at the registration desk by 17:00 on Tuesday, 12 December 2017. The slides will be combined into a single presentation for the day and thus, it is crucial that you submit your slide on time. It will not be possible to submit your slide on the day of the session or just before your session.

KEY	● Cities of the Future	● Basins of the Future	● Water and Sanitation Services	● Networking	● Professional Development
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Thought Leaders Profiles

MONDAY OPENING PLENARY: 08:30 - 10:20



Mrs Pamela Tshwete: She is the **first Deputy Minister of Water and Sanitation of the Republic of South Africa**, a position she was appointed to on 26 May 2014 by the President of the Republic of South Africa.

The Deputy Minister hails from Peelson, a rural in King Williams Town, in the Eastern Cape where she shaped her political career and participated in community struggles until she left the country for exile. Currently, she holds various senior positions in the African National Congress (ANC) as a member of the National Executive Committee (NEC). She is also the national executive committee of the African National Congress Women's League (ANCWL).

Prior to joining the Department of Water and Sanitation, Mrs Tshwete served passionately as Deputy Minister of Rural Development and Land Reform. The Deputy Minister is an experienced Parliamentarian. Before joining Cabinet, she served the National Parliament of South Africa, as a Whip for the Joint Monitoring Portfolio Committee on the Improvement of the Quality of Life and Status of Women and the Whip of the Health Portfolio Committee and later became the Whip of the Social Development Portfolio Committee.

The Deputy Minister's vision for the Department of Water and Sanitation is to provide coordinated provision of water and sanitation services to underprivileged communities.



Mr Anton Bredell, Minister of Local Government, Environmental Affairs, and Development Planning, Western Cape matriculated at Paul Roos Gymnasium, Stellenbosch. Studied marketing and sales management and was nominated as Marketer of the year in 1986. In 1995 he was elected to the Darling transitional Council and served as Deputy Mayor. In 2000 he was elected as Deputy Mayor of Swartland Municipality and was later elected as the municipality's Executive Mayor. Mr Bredell currently serves as the Chairperson of the Democratic Alliance in the Western Cape. In 2009 he was elected as Minister of Local Government, Environmental Affairs and Development Planning. His wife Michelle and two sons, Stephan and Johan, are his pride and joy.



Ms Diane d'Arras' relationship with IWA started in 1984 when she submitted a paper to the XVth International Water Supply Association Congress in Tunisia. Since then she has been active in the different IWA task groups, workshops, and congresses. A member of the IWA Strategic Committee since 2008, and board member since 2010, in 2014 Diane was elected one of two IWA VPs by the IWA's General Assembly in Lisbon. In 2015 she became IWA's Future President, from October 2016 onwards.

Diane graduated from the École Nationale des Ponts et Chaussées, Institut des Sciences Politiques de Paris, Institut des Hautes Etudes de la Défense Nationale, and was awarded the Légion d'Honneur for her involvement in research. She started her career in 1977 in a French Public Water Authority, Seine Normandie. She joined Lyonnaise des Eaux in 1981 taking charge of the corporate office for water subsidiaries. From 1984 to 1993 she turned to water operations in the Western Parisian Region. In 1993 she joined Aguas Argentinas in Buenos Aires, first as the Manager of the Water Production and Wastewater Treatment and later as Operations Manager. In 1998 she was appointed Technology and Research Senior VP at Degremont, an engineering company specialising in water and wastewater treatment.

In 2003 she became Technology and Research Senior VP for Suez Environnement, where she developed a structured international network of research centres. Diane d'Arras was appointed in January 2011 Senior Executive VP Water for Western Europe. She is in charge of operational management, strategy, and partnerships.



Dr Lester Goldman is extremely passionate about effectiveness and efficiency, having studied both extensively. An experienced corporate executive who has been involved in the professional association sector as a C-level executive for two professional associations, he is the current CEO of the Water Institute of Southern Africa (WISA). Lester has been involved in SMME development, finance and accounting, and entrepreneurship for more than 20 years. He has studied internationally in Applied Business Management, and, amongst his other qualifications, is a registered Professional Accountant. Lester is extremely passionate about unlocking the potential within teams and individuals, thereby contributing to their growth and development. He believes in continuous development and learning, and strives to create an enabling environment within organisations to allow positive change. Most importantly, Lester loves learning from every single person he meets.

Thought Leaders Profiles



Dr James Cullis is Technical Director and the Global Service Group Leader for Water in Aurecon. He is a specialist in the field of water resources, the water-energy-food nexus, and climate change impacts and adaptation. He has a broad range of experience including technical engineering and the social, political, environmental, and economic impacts of water resources development and management with a particular focus on water resources in Africa. He has experience as an engineer, project manager, and primary researcher in a range of water-related projects in Africa, from feasibility studies and engineering design of water-related infrastructure to strategic planning, policy development, water and economics, and capacity building. James' research interests include water resources management and decision making, hydrology, the impacts of invasive alien plants, environmental flows and eco-hydraulics, climate change impacts and adaptation, integrated assessment modelling, and modelling the water-energy-food nexus. As a scientist, James has research experience in South Africa, the UK, the USA, and Antarctica. James is an honorary research associate with the African Climate and Development Initiative (ACDI) at the University of Cape Town and external examiner for the Department of Civil Engineering.



Dr Geci Karuri-Sebina has been Executive Manager at South African Cities Network since 2011. She previously worked with National Treasury, the CSIR, HSRC and the University of California Los Angeles (UCLA) Advanced Policy Institute. Geci holds Masters degrees in Urban Planning and Architecture from UCLA and a PhD from the University of Witwatersrand (WITS). Her interests span from a range of development foresight, policy, planning and practice topics particularly relating to urban governance, the built environment and innovation systems. She has two decades of experience working and publishing in these fields. She recently published the book *Innovation Africa* (Emerald Books, 2016). Geci is a Council Member on the South African Council of Planners (SACPLAN), Visiting Research Fellow at the School of Governance, WITS, a Research Associate of the Institute for Economic Research on Innovation (IERI) and the National Research Foundation's South African Research Chair on Innovation and Development. She is also a founding director of the Southern African Node of the Millennium Project, co-founder of ForesightForDevelopment.org, an Associate Editor for the *African Journal for Science, Technology, Innovation and Development* (Taylor & Francis), and Africa Regional Editor for *Foresight: The journal of future studies, strategic thinking and policy* (Emerald).



Dr Adriana Marais, theoretical physicist, Head of Innovation at SAP Africa, and aspiring extra-terrestrial, believes that we are living at a unique point in the history of life on Earth. Adriana studied theoretical physics and philosophy at the University of Cape Town. She completed her MSc summa cum laude in quantum cryptography at the University of KwaZulu-Natal, and was awarded her PhD in quantum biology at the same institution in 2015. She continued as a postdoctoral researcher in the Quantum Research Group established by Prof Francesco Petruccione at UKZN, doing research in quantum biology, studying quantum effects in photosynthesis as well as the origins of prebiotic molecules and life itself. In 2017 she left academia for the corporate world, in the role of Head of Innovation at SAP Africa, driving digitisation and innovation on the continent.

Adriana was recognised by the Mail & Guardian as one of 2014's 200 Young South African achievers, was one of 15 recipients worldwide of the 2015 L'Oreal/UNESCO International Rising Talent Grant for Women in Science, and is the 2016 Royal Society of South Africa's Meiring Naude Medal awardee for a young researcher. In 2016 she attended the 66th Lindau Nobel Laureate Meeting as one of the 400 most-qualified young physicists worldwide, and the International Astronautical Congress in Mexico where she presented research on quantum astrobiology.

Since childhood Adriana has dreamed of living on another planet and is currently one of 100 Mars One Project astronaut candidates in the running to move to the red planet in the next decade. She hopes one day to continue her research on Mars but while still on Earth she is actively involved in the promotion of science and space exploration as Special Project Co-ordinator for the Foundation for Space Development South Africa, an exciting initiative of which is the Africa2Moon project. She is grateful for the platform she has as a Mars One candidate to inspire schoolchildren, teenagers, and adults to get excited about science, believe in their dreams, and remember Nelson Mandela's words: "It always seems impossible until it's done".

Thought Leaders Profiles



Ms Arlinda Ibrahimllari, Technical Director of the Sanitation Department in UKKO Joint Stock Company in Albania, has over eight years experience in the water industry. Her roles have included Water and Sanitation project management, technical support management and capacity development.

Arlinda holds a Bachelor Degree in Law and an MBA Degree from the Canadian Institute of Technology and an MSc. Degree in Environmental Engineering from the Polytechnic University of Tirana. Arlinda is the IWA Chair of the Emerging Water Leaders. Her focus, beside her professional development as an Engineer, and what she feels passionately about, is to help young water professionals to develop their organizational and leadership skills develop a professional network in the water industry, gain experience working with Senior professionals, and recognition and profile. She is trustful that the 'Future Water Leaders' will make change and inspire other generations. Arlinda speaks English and has a basic working knowledge of French and Italian.

TUESDAY MORNING PLENARY: 08:30 - 09:30

Title: Good Governance and Good Performance of Water Utilities: Building water-wise cities



Adv Faith Matshidiso Hashatse was first appointed to the Board of Rand Water in 2009 and currently serves as Chairperson. Advocate Hashatse has more than 25 years' experience working in various sectors including telecommunications regulation, higher education management, local government executive leadership, and in the areas of fundamental human rights and gender equity. She has more than 16 years' experience as a Non-executive Director in several institutions and companies, in sectors that include water utilities, economic and small business development, tourism promotion, and national park management. She currently works as a consultant with a particular focus on organisational change, organisational efficiency, and governance.

Title: Making water systems smarter and available for all



Mr Gustaf Olsson has been involved in IWA activities since 1973. He has served as the editor-in-chief of Water Science and Technology, in the IWA Strategic Council, and in the IWA Board of Directors. He has received the IWA Publication Award and is an Honorary Member of IWA as well as an IWA Distinguished Fellow. During the last six years he has been mentoring IWA Young Water Professionals from all continents to develop their scientific writing skills.

WEDNESDAY MORNING PLENARY: 08:30 - 09:00

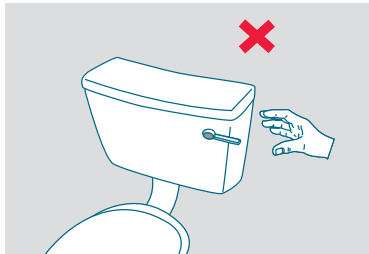
Title: Economics, so called nature based solutions and uncertainty



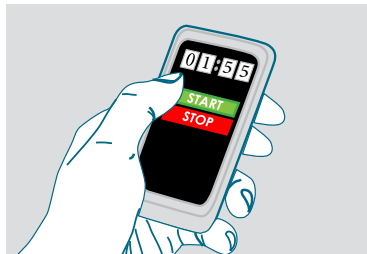
Professor Richard Ashley is a Professional Chartered UK Civil Engineer and former MD of the Pennine Water Group (PWG) at the University of Sheffield. He is Director of EcoFutures Ltd. (www.ecofutures.eu), researcher in flood resilience at IHE in Delft, Netherlands, and Adjunct Professor at Lulea Technical University, Sweden. Richard is the recipient of the IWA/IAHR Joint Committee on Urban Drainage 2014 Triennial Career Achievement Award. Richard has worked in practice and has a research career spanning 50 years in the design and science of urban drainage systems. In the last 20 years he has worked extensively in cross-disciplinary activities covering governance, sustainability, and resilience of urban water systems. He has authored or contributed to more than 500 publications and has made significant research findings, mainly on urban drainage and flooding.

TOP WAYS TO SAVE WATER INDOORS

**Cape Town has water restrictions in place.
Keep saving by taking these key indoor actions.**



Only flush when necessary.
Don't use it as a dustbin.
'If it's yellow let it mellow.
If it's brown, flush it down.'



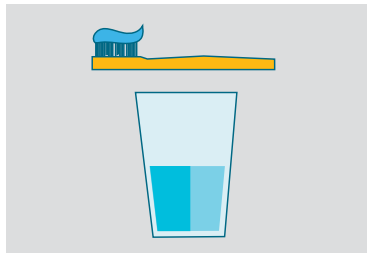
Take a short 2-minute shower.
A standard (non-water-saving)
showerhead can use as much
as 16 litres per minute.



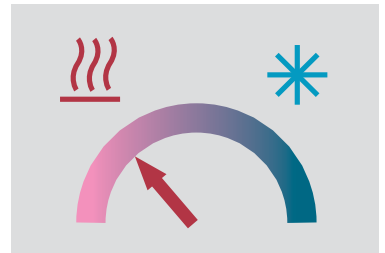
Collect your shower, bath and
basin water and re-use it to
flush your toilet as a priority. If
extra, use for garden and
vehicle cleaning.



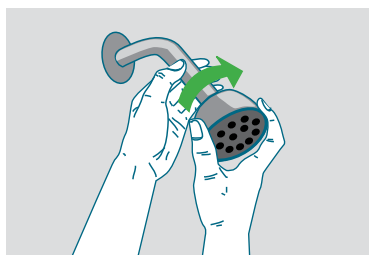
Wait for a full load before running
washing machines and dishwashers.
Re-use washing water
for flushing toilets.



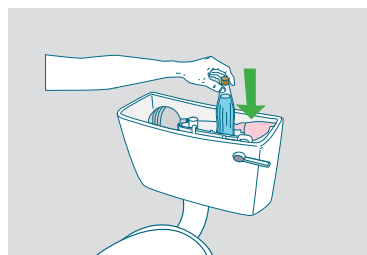
Use a cup instead of running
taps in the bathroom or
kitchen for brushing teeth,
shaving, drinking etc.



Defrost foods in the fridge or
naturally rather than placing
it under running water.



Switch to an efficient showerhead
which uses no more than 10 litres
per minute, as per the City's By-law.



Upgrade to a multi-flush toilet
and/or put a water displacement
item in the cistern which can halve
your water use per flush.



Fit taps with aerators or
restrictors to reduce flow to
no more than 6 litres per minute,
as per the City's By-law.

Report pipe bursts by SMS 31373 (max 160 characters) and water wastage to: water@capetown.gov.za
or call 0860 103 089. (Standard SMS and 0860 call rates apply) Or WhatsApp to 063 407 3699
For more on water saving, restrictions and safe use of greywater go to: www.capetown.gov.za/thinkwater

* Greywater use has some health and hygiene risks to be avoided. Keep hands and surface areas sanitised/disinfected.

THINKWATER
CARE A LITTLE. SAVE A LOT.



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Making progress possible. Together.

Detailed Programme: Day 1 and 2

DAY 1 | SUNDAY, 10 DECEMBER

DAY 2 | MONDAY, 11 DECEMBER 2017

DAY 1 | SUNDAY, 10 DECEMBER 2017

09:00 - 12:00 | REGISTRATION

12:00 - 17:00 | ● PRE-CONFERENCE NETWORKING @ THE WATER HUB IN FRANSCHHOEK

DAY 2 | MONDAY, 11 DECEMBER 2017

07:30 - 08:30 | REGISTRATION

Oral presenters to upload their presentation in respective venues before 08:00

Poster presenters for session one to put up posters before 08:30

08:30 - 10:30 | ● OPENING PLENARY

Welcome words and panel discussion on what should our world look like in 2050?

Dignitaries | *Ms Pamela Tshwete, MP, Deputy Minister of Water and Sanitation; Mr Anton Bredell, Minister of Local Government, Environmental Affairs, and Development Planning, Western Cape*

Thought Leaders | *Ms Diane d'Arras, Dr Lester Goldman, Dr Adriana Marais, Dr James Cullis, Dr Geci Karuri-Sebina and Ms Arlinda Ibrahimllari*

10:30 - 10:50 | BREAK AND POSTER SESSION ONE

10:50 - 12:40 | MID-MORNING SESSIONS

AUDITORIUM 2	<p>● RESOURCE RECOVERY AND REUSE</p> <p>Chair: <i>A Ibrahimllari P Cornel</i></p>	<p>Overcoming the regulatory barriers to resource recovery from decentralized sanitation in East Africa <i>E Mrimi (Tanzania)</i></p> <p>Simulation of sanitation concepts for source separated wastewater <i>TZ Shoa (Germany)</i></p> <p>Bio-Brick production from source separated urine using microbial carbonate precipitation <i>D Randal (South Africa)</i></p> <p>Mircobial reduction efficiency of decentralized wastewater treatment plants in Lesotho: Health risk implications for effluent reuse <i>I Amoah (South Africa)</i></p> <p>Removal of nitrogen and phosphorus removal from anaerobic baffled reactor effluent using common duckweed – Lemna Minor L <i>A Oyawoye (South Africa)</i></p> <p>Exploration of the use of solar thermal energy for faecal sludge drying <i>T Mugauri (South Africa)</i></p>
MR 1.60	<p>● WATER TREATMENT</p> <p>Chair: <i>C Spagnuola H Yamamura</i></p>	<p>Practical research on TOC removal by ion exchange and the prevention of corrosion – cases for water-link tap water and wastewater effluent after RO treatment <i>E de Meyer (Belgium)</i></p> <p>Comparison of sand-based water filters for arsenic removal in China <i>K Smith (China)</i></p> <p>Improving aeration systems in saline water: Measurement of local bubble size and oxygen transfer rate of conventional membrane diffusers <i>J Behnisch (Germany)</i></p> <p>Emerging contaminants and micropollutants: New technologies for treatment and removal from water <i>M Knowles (United Kingdom)</i></p> <p>Enhanced photocatalytic degradation potential of graphene oxide based ZnFe2O4 magnetic nanocomposites under UV, solar and LED light <i>M Zahid (Pakistan)</i></p> <p>Adsorption characteristics of geosmin and 2-methylisoborneol on graphene oxide <i>T Nagasato (Japan)</i></p>
MR 2.61 – 2.63	<p>● ADDRESSING GAPS TO ATTAIN WATER SECURITY</p>	<p>Organised by the Oregon State University & Monash University South Africa</p> <p>The workshop is limited to 30 participants.</p> <p>The aim of the workshop is how to identify and address gaps in current water management practices to achieve water security in river catchments.</p> <p>The water security principle entails the capacity of society to safeguard access to adequate quantity and quality of water for productive purposes, human well-being while ensuring the preservation of ecosystems.</p> <p>This collaboratively run workshop highlights how multiple, and often competing, uses and demands typify water allocation scenarios in river basins. In this way, the workshop draws attention to the role of dialogue learning, shared understanding, culture and values among water users in achieving water security. These ideas are explored and experienced through the playing of the River Basin Game, which is a physical representation of a basin with a central river channel that has several offtakes serving various water demands and uses. This is followed by an interactive, multimedia, and dialogue based session in which participants discover how collective identity, culture, and shared values shape water security at the river basin level. It is hoped that participants will leave the workshop with a better conceptual and practical understanding of how to apply the water security principle in their own context.</p>

KEY ● Cities of the Future ● Basins of the Future ● Water and Sanitation Services ● Networking ● Professional Development

Detailed Programme: Day 2

DAY 2 MONDAY, 11 DECEMBER 2017

MR 2.64 - 2.66	<p>● SECURING BASIC NEEDS VERSUS SUSTAINABILITY</p> <p>Chair: V Copa J Nielsen W Novalia</p>	<p>Organised by Monash University Australia</p> <p>Many young water professionals in developing countries are faced with the challenge to choose between two different approaches to water management: the conventional (securing access) or sustainability (securing sustainability). The distinction between these approaches is more pronounced in developing cities. In this session, facilitators (Vanessa Copa (Bolivia), Josh Nielsen (Australia), Wikke Novalia (Indonesia)) from Monash University, Australia will utilise a case study, group discussions and a debate to begin a dialogue around the advantages and challenges of each approach in developing cities. The round table discussions will be preceded by a presentation introducing the case study. Participants will be divided into two opposing teams for or against the debate question: Should developing cities invest in sustainable water management before securing basic water supply and sanitation? A representative of each group is expected to report back to the audience. Once all arguments are presented, the participants will then be invited to present their counter arguments. Then, they will be given the opportunity to form a rebuttal. Finally, the session will be ended by the facilitators, initiating a reflection on the issues raised during the debate.</p>
12:40 - 13:30 LUNCH AND POSTER SESSION ONE		
13:30 - 14:55 POST-LUNCH SESSIONS		
AUDITORIUM 2	<p>● RESOURCE RECOVERY AND REUSE: INDUSTRIAL WASTEWATER</p> <p>Chair: H Yamamura P Cornel</p>	<p>Model-based optimization of a full-scale industrial anaerobic reactor producing biogas H Feldman (Denmark)</p> <p>Is it possible to successfully treat biodiesel wastewater and produce electricity simultaneously? L Grobbelaar (South Africa)</p> <p>Continuous ion exchange for value recovery from mine water C Spagnuolo (South Africa)</p> <p>Development of a novel polysulfone membrane with embedded zirconium compound for phosphate recovery from water A Hafuka (Japan)</p> <p>Identification and isolation of non-polar compounds from human faecal extract E Mary (South Africa)</p>
MR 1.60	<p>● FUTURE WATER CITIES IN DROUGHT</p>	<p>Organised by the South African Young Water Professionals (YWP-ZA)</p> <p>The Host City is in a severe drought and provides an opportunity to learn lessons from Cape Town and other cities who have experienced severe drought. Water Conservation and Demand Management are only part of the solution. Level 5 water restrictions require residents (and conference delegates) to reduce consumption to less than 87 litres per person per day.</p> <p>The aim of this workshop is to inform and discuss alternate water supply options that can be used in urban water planning, and will touch on Water Conservation and Demand Management; Surface water; Desalination; Groundwater; Storm Water Management; and Water Reuse and Recycling all within the context of drought.</p>
MR 2.61 - 2.63	<p>● AGAINST THE FLOW: ENGAGING CITIES UTILITIES AND INDUSTRIES IN WRM</p>	<p>Organised by the International Water Association (IWA)</p> <p>How can urban stakeholders become agents of change in improving water resources across the wider catchment?</p> <p>Utilities providing water for their cities need to work hand in hand with basin stakeholders to ensure water security for their cities. IWA is developing a Basin Action Agenda which will provide guidance pathways to influence and activate utilities, cities and their industries to become water stewards working with basin and catchment organisations, as well as other water management stakeholders (e.g. agriculture and mining).</p> <p>The objective of the proposed workshop is to have a working session which actively provides inputs and perspectives of YWPs from different sectors on how end-users including cities, utilities and industries can play a key role in securing water resources and their efficient use for the benefits of all water users across a catchment. This discussion will inform the IWA Basin Action Agenda which is driven by the IWA and its members and partners and will be finalised for the 2018 IWA World Water Congress in Tokyo.</p>
MR 2.64 - 2.66	<p>● WATER AND AGRICULTURE</p> <p>Chair: H von Dittfurth N Hanke-Louw</p>	<p>Greywater reuse in the South African agricultural sector S van Staden (South Africa)</p> <p>Cultivating water management transformation: The application of collaborative expansive learning tools in addressing water management in the agricultural sector of the Selati catchment, South Africa K Chihambakwe (South Africa)</p> <p>Surface modification and grafting of macadamia nutshell powder with diphenylcarbazine for CR(VI) sequestration in aqueous solutions O Nchoe (South Africa)</p> <p>Impact of mining, farming and industrial wastewater discharge effluents on water quality at raw inlet of Vaalkop potable water treatment plant P Dikobe (South Africa)</p>

KEY

● Cities of the Future

● Basins of the Future

● Water and Sanitation Services

● Networking

● Professional Development

Detailed Programme: Day 2

14:55 - 15:20 | BREAK Sponsored by the WISA Mine Water Division



15:20 - 17:10 | LATE AFTERNOON SESSIONS

AUDITORIUM 2	<p>● ENVIRONMENTAL WATER QUALITY</p> <p>Chair: L Underhill J Burgess</p>	<p>The parameterisation and application of an erosion and sediment transport model to data-scarce <i>D Gwapedza (South Africa)</i></p> <p>What makes the quality of source water differ from the household water in rural and urban areas of Tanzania? <i>F Matwewe (Tanzania)</i></p> <p>What is the influence of land use on organochlorine pesticide residues in surface waters of Lake Naivasha catchment, Kenya? <i>J Onyango (Netherlands)</i></p> <p>Variability of microbial water quality at the Isipingo River, Kwa-Zulu Natal <i>A Sithabe (South Africa)</i></p> <p>Microbial quality variation in the water points in three climatically different regions in Tanzania <i>A Boniphace (Tanzania)</i></p>
MR 1.60	<p>● DEVELOPING FACILITATION SKILLS</p>	<p>Organised by Livinglands and Young Expert Program (YEP)</p> <p>How to facilitate towards a pre-defined outcome?</p> <p>The participants will acquire facilitation skills which are useful in meetings, in collaborating with co-workers, partners, and/or communities. We will teach you how to facilitate your meeting, conversation, and/or discussion towards an outcome. The session will start with how to develop outcomes, followed by providing an overview of facilitation tools and methods that will help reach the outcome, as well as allow participants to practice developing outcomes and picking the best facilitation methods.</p>
MR 2.61 - 2.63	<p>● DEVELOPING SUCCESSFUL PROPOSALS: GRANTS AND FUNDS</p>	<p>Organised by Poznan University of Technology, Gdansk University of Technology and Kompetenzzentrum Wasser Berlin GmbH</p> <p>How to develop successful proposals for receiving grants and funds and how to convince decision makers getting financial support?</p> <p>Participants will gain tips on how to develop successful proposals for receiving grants and funds as well as how to convince decision makers to get financial support to attend IWA conferences all around the world. The workshop is divided into round table discussions and individual group work. Jędrzej Bylka (Poznan University of Technology) will guide the participants through different grants opportunities, Vince Bakos (Budapest University of Technology and Economics) will discuss the importance of grants. Jakub Drewnowski (Gdansk University of Technology) and Christian Loderer Kompetenzzentrum Wasser Berlin GmbH) will share on their experience about preparing a successful proposal. In the individual group work, the participants finally have time to exercise the learned tips during the workshop. During the whole workshop the participants have the chance for intense networking and sharing their experience.</p>
MR 2.64 - 2.66	<p>● ORGANISING FOR THE DEVELOPMENT OF RESILIENT WATER NETWORK</p>	<p>Organised by ARUP and SEIA</p> <p>How to develop efficient networks?</p> <p>The realisation of efficient water networks involves the coming together of a range of diverse factors: incorporation of smart technologies, effective delivery of water, financial viability, low-carbon impact, etc. Key protagonists - policy-maker, network designer, capital funder and end user - impact which factors are prioritised and ultimately how the network is developed. This workshop aims to develop an understanding of how the key protagonists lead the development of water networks across different contexts by engaging the delegates in an interactive workshop, exploring how efficient water networks are developed from a big picture perspective.</p>

17:10 - 17:30 | CONFERENCE PHOTO | VENUE: PASSAGE BETWEEN AUDITORIUM 2 AND MARIMBA

KEY

● Cities of the Future

● Basins of the Future

● Water and Sanitation Services

● Networking

● Professional Development

Detailed Programme: Day 3

DAY 3 | TUESDAY, 12 DECEMBER 2017

07:30 - 08:30 | REGISTRATION

Oral presenters to upload their presentation in respective venues before 08:00
Poster presenters for session two to put up posters before 08:30

● 08:30 - 09:30 | MORNING PLENARY

Utilities in water-wise cities

Thought Leader: Making water systems smarter and available for all | *Mr Gustaf Olsson*

Thought Leader: Good Governance and Good Performance of Water Utilities: Building water-wise cities | *Adv Faith Matshidiso Hashatse*

09:30 - 10:00 | BREAK and POSTER SESSION TWO

10:00 - 11:50 | MID-MORNING SESSIONS

AUDITORIUM 2	<p>● OPTIMIZATION OF WATER AND SANITATION SERVICES</p> <p>Chair: <i>A Ibrahimli</i> <i>G Langergraber</i></p>	<p>Supplying water to unplanned low income settlements: Implications on water utility performance – the case of Lingwe Water Board, Malawi <i>E Banda (Malawi)</i></p> <p>Energy survey – An efficiency assessment of a water treatment plant <i>J Amengor (Ghana)</i></p> <p>Exergy approach in evaluation of water distribution system <i>J Bylka (Poland)</i></p> <p>Water meets didactics: Providing first level response officers in Cape Town the dedicated training they need <i>J Oost (Netherlands)</i></p> <p>Wetskills water challenges: The power of diversity and teambuilding makes the water flow <i>A Doornhof (Netherlands)</i></p> <p>Sizing of sustainable energy storage for off-grid decentralized wastewater treatment units <i>DQ Pulido (Netherlands)</i></p>
MR 1.60	MEETING ROOM	During this time the room will be prepared for the Career Fair in the afternoon.
MR 2.61 - 2.63	<p>● PERSONAL LEADERSHIP: THE DETERMINANT FOR EFFECTIVE MANAGEMENT</p>	<p>Organised by Young Expert Programme (YEP)</p> <p>Explain, experience and unravel the definitions of (personal) leadership, management and organisations. By using personal inputs and comparing the variety of organisations that are represented by the young professionals, an interesting view is given on the role of personal leadership and its relationship with organizational culture and management style. Learn to assess the dominant organizational culture, as the main determinant for effective leadership with Paul van Koppen (YEP Water & Agrofood, Netherlands) in this highly energetic and interactive session. Describe its different meanings, shapes, structures and characteristics in this session with Liezl le Roux and Lyndre Nel (Living Lands, South Africa). Learn about existing and new (strategic) leadership styles in the water sector and how these have an impact on management and organisational structures, both from a personal and a sectoral point of view.</p>
MR 2.64 - 2.66	<p>● CREATING WATER-WISE CITY CHAMPIONS</p>	<p>Organised by the International Water Association (IWA) and ARUP Group Ltd.</p> <p>How to champion the Water-Wise Cities Principles?</p> <p>Developing a network one can trust to share knowledge and experience is the foundation of professional development. In this workshop, IWA and ARUP will offer Young Water Professionals (YWP) the opportunity to become champions of the IWA Principles for Water-Wise Cities, empowering them to become leaders and change-makers for a water-wise world. Through the lens of the Principles, participants will be asked to share stories from their cities and to identify how their work/research fits into the water-wise vision, establishing a worldwide community with a shared vision for urban resilience. Finally, there will be a panel of leading YWPs to share their inspiring stories and how they achieved their goals. Become inspired, join us on the journey.</p>

11:50 - 12:50 | LUNCH and POSTER SESSION TWO

12:50 - 14:20 | POST-LUNCH SESSIONS

KEY

● Cities of the Future

● Basins of the Future

● Water and Sanitation Services

● Networking

● Professional Development

Detailed Programme: Day 3

AUDITORIUM 2	<p>● WATER QUALITY AND HEALTH</p> <p>Chair: S Ramphal R Ashley</p>	<p>An assessment of the effect of storage containers on the quality of stored water C Ataguba (Nigeria)</p> <p>Water quality assessment of rainwater in storages of urban areas MT Islam (Sweden)</p> <p>Compendium on drinking water systems and technologies from source to consumer L Breitenmoser (Switzerland)</p> <p>Breaking through the acid barrier: Survival response of waterborne pathogenic bacteria to gastric fluid A Singh (South Africa)</p> <p>Escherichia Coli – Communities in wastewater: An indication of new super gene combinations? Z Delair (South Africa)</p> <p>Groundwater sources as potential source of emerging pathogens: A case study in Mpumalanga and Gauteng Province of South Africa C van der Loo (South Africa)</p>
MR 1.60	● EWSETA CAREER FAIR ROUND ONE	<p>The event aims to provide a neutral, informal engagement platform for engagement for young professionals to have an open dialogue in a speed dating format, with representatives of various organisations/companies in the water sector. For some of you this may be the first time that you will get to interact with several different organisations in the water sector. This Career Fair is a fantastic opportunity to gain as much knowledge as you can on the job interview process and the diversity of opportunities in the water sector. Companies will ask you questions that are typically asked in a job interview. Since this is not a real job interview, the questions will not be specific to a particular position but rather meant to get you to better present yourself, know what to expect, and get personalised feedback. You'll learn how to highlight your skills, strengths, passions, and weaknesses and how to illustrate how you applied your skills and strengths to a situation, or used problem solving when in a difficult situation.</p>
MR 2.61 – 2.63	● ETHICAL LEADERSHIP IN THE WATER SECTOR	<p>Organised by the South African Young Water Professionals (YWP-ZA) and the School of Public Leadership (SPL), Stellenbosch University, South Africa</p> <p>What does it mean to be an ethical leader and why is it critical to achieving the SDGs?</p> <p>Achieving the Sustainable Development Goals (SDGs) related to water and sanitation is dependent on good governance frameworks; without ethical leadership this cannot be achieved. Chris Botha (SPL, South Africa) will guide the next generation of leaders through the theoretical underpinnings of ethical leadership and together with Nora Hanke-Louw (YWP-ZA, South Africa) lead an interactive session on a case study to illustrate the power of ethical leadership in the water sector.</p>
MR 2.64 – 2.66	● LINKING ASPIRING ENVIROPRENEURS TO THE BUSINESS OPPORTUNITIES OF THE WATER SECTOR	<p>Organised by the South African Young Water Professionals (YWP-ZA) and GreenMatter</p> <p>How to develop a green idea into a profitable enterprise?</p> <p>This workshop will introduce you to the lessons learned from the Enviropreneur Programme (organised since 2015 by YWP-ZA) that is designed to support and guide entrepreneurs through the phase of business development and teach them how to run a successful business. Participants will have the opportunity to engage with past participants, interact with panellists leading thinking in the green economy/green business sectors and practically interact with a business canvas tool that give you an opportunity to start clarifying your own emerging business ideas.</p>

14:20 - 14:45 | BREAK

14:45 - 16:35 | LATE-AFTERNOON SESSIONS

AUDITORIUM 2	<p>● WATER RESOURCES MANAGEMENT</p> <p>Chair: N Funke</p>	<p>Sustaining rural livelihoods in South Africa: A study of water use and access practices in rural Eastern Cape C Murata (South Africa)</p> <p>Water footprints as an adaptive management mechanism to cope with water shortages in the sugar industry in Swaziland: A case of the Usuthu River Basin S Mthimkhulu (South Africa)</p> <p>Assessing impacts of multi-sectoral drivers and pressures to support sustainable water management in the Indian Krishna River Basin L Breitenmoser (Switzerland)</p> <p>Optimization of branched piece reinforcements for large diameter dam pipes in South Africa A Naicker (South Africa)</p> <p>Boracay Island integrated water supply and wastewater master plan – sustaining development of the world's top tourist paradise R Estacio (Philippines)</p> <p>Reducing concentrations of microplastics and organic micropollutants – upstream and downstream abatements strategies M Ekblad (Sweden)</p> <p>Dam performance monitoring using HDAM probabilistic storage focusing tool: Tzaneem Dam case study H Rananga (South Africa)</p>
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KEY

● Cities of the Future

● Basins of the Future

● Water and Sanitation Services

● Networking

● Professional Development

Detailed Programme: Day 3

DAY 3 TUESDAY, 12 DECEMBER 2017

MR 1.60	<ul style="list-style-type: none"> EWSETA CAREER FAIR ROUND TWO 	<p>The event aims to provide a neutral, informal engagement platform for young professionals to have an open dialogue in a speed dating format with representatives of various organisations in the water sector. For some of you this may be the first time that you will get to interact with several different organisations in the water sector. This Career Fair is a fantastic opportunity to gain as much knowledge as you can on the job interview process and the diversity of opportunities in the water sector. Companies will ask you questions that are typically asked in a job interview. Since this is not a real job interview, the questions will not be specific to a particular position but rather meant to get you to better present yourself, know what to expect, and get personalised feedback. You'll learn how to highlight your skills, strengths, passions, and weaknesses and how to illustrate how you applied your skills and strengths to a situation, or used problem solving when in a difficult situation.</p>
MR 2.61 - 2.63	<ul style="list-style-type: none"> A 25 HOUR DAY – TIME MANAGEMENT STRATEGIES 	<p>Organised by Aha! Training and Development South Africa</p> <p>Time management skills are essential for professional success in any workplace. Those able to successfully implement time management strategies can control their workload rather than spend each day in a frenzy of activity reacting to crisis after crisis - stress declines and personal productivity soars! These highly effective individuals can focus on the tasks with the greatest impact to them and their organization. In this session, Taryn-lee Kearney (Aha Training and Development) will cover strategies to help participants learn these crucial tools for success. The session will be highly interactive with actionable worksheets where participants will be given a skill set that include personal motivation, delegation skills, organization tools, and crisis management.</p>
MR 2.64 - 2.66	<ul style="list-style-type: none"> UNDERSTANDING WATER SECTOR INNOVATION; WHERE, HOW AND WHY 	<p>Organised by Metro Pacific Water and Isle Utilities</p> <p>How do we spark and lead innovation?</p> <p>Innovation is "something new that makes an impact". But where the impact is happening, how the impact is delivered, and what is the bigger picture of these impacts are often unexplored. The workshop aims (1) to consolidate the experiences and aspirations of YWPs in making innovations happen through a Global Innovation Map, and (2) to stimulate the global collaborative innovation effort among YWPs by developing a high-level Water Innovation Framework.</p>
16:45 - 17:30 ● AFTERNOON PLENARY: CAREER FAIR PANEL: Skills, Leadership and Progression in the Water Sector		

KEY

● Cities of the Future

● Basins of the Future

● Water and Sanitation Services

● Networking

● Professional Development

Detailed Programme: Day 4

DAY 4 | WEDNESDAY, 13 DECEMBER

07:30 - 08:30 | REGISTRATION

Oral presenters to upload their presentation in respective venues before 08:00
Poster presenters for session three to put up posters before 08:30

08:30 - 09:00 | ● MORNING PLENARY

Development of cities of the future
Thought Leader: Economics, co called nature based solutions and uncertainty | *Professor Richard Ashley*

09:00 - 10:50 | MORNING SESSIONS

AUDITORIUM 2	TWO MINUTE THESIS COMPETITION <i>Chair:</i> <i>A Maherry</i>	<p>Two Minute Thesis session offers a chance for young water professionals to present their work/ research whilst cultivating their communication skills. Young water professionals will explain their work/ research in two minutes to an audience that is non-specialist. Their presentation will be supported by one PowerPoint slide. The Two Minute Thesis Presentation Sessions are part of the adjudication for the Best Two Minute Thesis and Poster Award.</p> <p>Please refer to Poster Session One for details.</p>
MR 1.60	● WATER GOVERNANCE <i>Chair:</i> <i>V Weber</i> <i>H Roman</i>	<p>Core aspects of international water supply and wastewater disposal with a focus on developing countries <i>M Lawens (Germany)</i></p> <p>Perspectives on water security in the South African context <i>N Funke (South Africa)</i></p> <p>The national groundwater strategy <i>S Naicker (South Africa)</i></p> <p>Improving urban water management: Wetsnext? Involving young talents for roll-out the city blueprint approach to cities worldwide <i>B Madonsela (Netherlands)</i></p> <p>David and Goliath: Strengthening the voice of the "little guy" in deepening democratic water governance <i>M Weaver (South Africa)</i></p> <p>Investigating water wastage awareness in urban and rural communities, a case study of Limpopo Province, South Africa <i>P Njoku (South Africa)</i></p> <p>Public awareness on water conservation issues <i>E Osman (Albania)</i></p> <p>The lock-in to infrastructural solutions in Jakarta's flooding institutions: A reflection from the past 400 years <i>T Octavianti (United Kingdom)</i></p>
MR 2.61 - 2.63	● SKILLS TO WORK ACROSS SILOS AND COMMUNICATE WITH THE PUBLIC	<p>Organised by Aurecon South Africa</p> <p>How to work across the silo and communicate with the public? All too often water professionals work in "silos", providing inappropriate solutions not accounting for public needs. As the water sector's future leaders, YWPs need to develop and manage water infrastructure in a way that encourages public ownership. This session aims to capacitate YWPs with the tools and problem solving skills to effectively consider and engage the public without technical jargon and intimidating communicating techniques.</p> <p>Aurecon has been using Design Led Thinking as a tool to design with the end user in mind. The tools and communication techniques are a useful way to work across silos and design for public needs.</p>

10:50 - 11:20 | BREAK and POSTER SESSION THREE

11:20 - 12:45 | MID-MORNING SESSIONS

AUDITORIUM 2	TWO MINUTE THESIS COMPETITION <i>Chair:</i> <i>A Maherry</i>	<p>Two Minute Thesis session offers a chance for young water professionals to present their work/ research whilst cultivating their communication skills. Young water professionals will explain their work/ research in two minutes to an audience that is non-specialist. Their presentation will be supported by one PowerPoint slide. The Two Minute Thesis Presentation Sessions are part of the adjudication for the Best Two Minute Thesis and Poster Award.</p> <p>Please refer to Poster Session Two for details.</p>
MR 1.60	● WASTEWATER INFRASTRUCTURE (1) <i>Chair:</i> <i>M Mnguni</i> <i>L Sibiya</i>	<p>Proposal for a scheme to prevent sewer blockages: Using Ethekwini Municipality (South Africa) as case study <i>S Srivastava (South Africa)</i></p> <p>Removal of pollutants from waste water samples using a novel nanosponge biopolymer composite <i>AL Taka (South Africa)</i></p> <p>Overcoming stringent environmental hurdle: Upgrade strategy for metro Manila's largest wastewater treatment system <i>RJ Samia (Philippines)</i></p> <p>Performance assessment of a demonstration vertical flow constructed wetland purifying anaerobically treated domestic wastewater <i>P Arumugam (South Africa)</i></p> <p>Poultry wastewater treatment using a static granular bed reactor <i>Z Rinquest (South Africa)</i></p>

KEY

● Cities of the Future

● Basins of the Future

● Water and Sanitation Services

● Networking

● Professional Development

Detailed Programme: Day 4

DAY 4 WEDNESDAY, 13 DECEMBER 2017

MR 2.61 – 2.63	<ul style="list-style-type: none"> ● PRACTICAL APPLICATION OF QUALITATIVE & QUANTITATIVE RESEARCH METHODS 	<p>Organised by CSIR and Georg-August-Universität Göttingen and Chuo University</p> <p>How to practically apply joint use of qualitative and quantitative data analysis?</p> <p>Proper information, robust data analysis and relevant evidence-based decision-making support tools are key to effective decisions, interventions and policy design in the water sector, especially in situations of political and scientific uncertainty. This workshop aims to promote the joint use of qualitative and quantitative data analysis in the context of decision-making to promote effective agricultural water use in a case study in the Maruleng Local Municipal area in South Africa. Using World Café method participants will practice the presented qualitative and quantitative methods.</p>
12:45 - 13:45 LUNCH and POSTER SESSION THREE		
13:45 - 15:25 POST-LUNCH SESSIONS		
AUDITORIUM 2	<p>TWO MINUTE THESIS COMPETITION</p> <p>Chair: A Maherry</p>	<p>Two Minute Thesis session offers a chance for young water professionals to present their work/ research whilst cultivating their communication skills. Young water professionals will explain their work/ research in two minutes to an audience that is non-specialist. Their presentation will be supported by one PowerPoint slide. The Two Minute Thesis Presentation Sessions are part of the adjudication for the Best Two Minute Thesis and Poster Award.</p> <p>Please refer to Poster Session Three for details.</p>
MR 1.60	<ul style="list-style-type: none"> ● WASTEWATER INFRASTRUCTURE (2) <p>Chair: P Arumugam-Nanoolal C Loderer</p>	<p>The treatment of biodiesel wastewater using an integrated electrochemical and adsorption process D Myburgh (South Africa)</p> <p>Adsorption of chromium species from industrial effluents using mechano-chemically modified cryptocrystalline magnesite-bentonite clay nanocomposite F Tjia (South Africa)</p> <p>Seasonal variations of endocrine disrupting contaminants (EDCs) in South African wastewater treatment works (WWTWs) E Archer (South Africa)</p> <p>Potential effects of nanopollutants on biological wastewater treatment P Cervantes (Mexico)</p> <p>Advanced monitoring and computer simulation for cost effective WWTP J Drewnowski (Poland)</p>
15:30 - 16:45 CLOSING SESSION		
The Conference: Now what? & Awards Ceremony		
19:00 - 23:00 ● GALA COCKTAIL		

KEY

● Cities of the Future

● Basins of the Future

● Water and Sanitation Services

● Networking

● Professional Development

Poster Session One

MONDAY, 11 DECEMBER 2017

Title	Presenter
ECONOMIC STUDY OF ASSURANCE OF SUPPLY REQUIREMENTS FOR WATER RESOURCE MANAGEMENT – CONCEPT	S Barnard (South Africa)
SOCIAL MEDIA AND LEARNING IN WATER RESOURCE MANAGEMENT: A CASE STUDY OF MPOPHOMENI TOWNSHIP	E Dhlwayo (South Africa)
SUGGESTING A KEY PERFORMANCE INDICATOR FOR ASSESSING THE IMPACT OF PRESSURE CONTROL MANAGEMENT OF A WATER DISTRIBUTION NETWORK ON HOUSEHOLD WATER CONSUMPTION	D Kofinas (Greece)
WATER SUPPLY AND ITS CHALLENGES IN RURAL EL SALVADOR	M Liemberger (Austria)
CAN WE DRINK FROM THE SPRINGS? A CASE STUDY FOR THE CITY OF CAPE TOWN	S Magqazolo (South Africa)
THE IDENTIFICATION AND MAPPING OF LIVESTOCK GRAZING PATTERNS AND THE GRAZING ACTIVITY SYSTEM IN THE TSITSA RIVER SUB-CATCHMENT: ESTABLISHING AND RESTORING ECOSYSTEM SERVICES PROVIDED BY HILLSIDE SEEP WETLANDS	Q Mkabile (South Africa)
MANAGING THE UNAUTHORIZED CONSUMPTION IN WATER SUPPLY SYSTEMS: CASE STUDIES IN SOUTH AFRICA	T Mphahlele (South Africa)
THE DAILY REALITIES OF YOUNG PEOPLE BETWEEN THE AGES 16 AND 35 LIVING IN KRWAKRWA AND UPPER NCERHA VILLAGE, EASTERN CAPE	N Nohayi (South Africa)
LONG-TERM TEMPORAL AND SPATIAL CHANGES IN MICROBIAL COMMUNITIES WITHIN A LARGE-SCALE SOUTH AFRICAN DRINKING WATER DISTRIBUTION SYSTEM	S Potgieter (South Africa)
PRACTICAL EXPERIENCE IN USING THE INFRASTRUCTURE LEAKAGE INDEX (CASE STUDY: FARS WATER AND WASTE WATER COMPANY)	E Rastegari (Iran)
ASSESSING THE WATER AFFORDABILITY FOR RESIDENTIAL CONSUMERS IN SOUTH AFRICAN LOCAL MUNICIPALITIES	L Shai (South Africa)
BENEFITS AND CHALLENGES OF POSTGRADUATE ACADEMIC NETWORKS: UCL WATER GROUP EXPERIENCE	Z Yao (United Kingdom)
NEED TO PROVIDE WATER SAFETY IN RIVER BASIN KORCA CITY	S Kokojka (Albania)
MULTISCALE DRIVERS OF SUGARCANE EXPANSION AND IMPACTS ON WATER RESOURCES ACROSS SOUTHERN AFRICA	S Ngcobo (South Africa)
WATER SANITATION AND HYGIENCE (WASH) PRACTICES IN COMMUNITY BASED CARE FOR PEOPLE LIVING WITH HIV AND AIDS	C Mulopo (South Africa)
ACCESS TO WATER; A KEY FACTOR IN BOOSTING THE SELF ESTEEM OF PEOPLE IN RURAL COMMUNITIES	CM Chibuzor (Nigeria)
HOW DO URBANIZATION AND SUDS AFFECT THE WATER CYCLE IN CITITES AND HOW CAN WE MODEL IT?	T Danielsen (Denmark)
WATER – AN ECONOMIC GOOD? IS PRICE ON WATER LEADING TO A MORE EFFECTIVE AND SUSTAINABLE USE?	A Bjørnskov (Denmark)
DETECTION OF AMOEBA ASSOCIATED LEGIONELLA PNEUMOPHILA IN HOSPITAL CRITICAL UNITS OF JOHANNESBURG	P Muchesa (South Africa)
CHALLENGES OF TREATING LOW TURBIDITY SOURCE WATER: WIGGINS WATERWORKS CASE STUDY	MB Sibiyi (South Africa)
ARSENIC REMEDIATION USING A NOVEL SOIL BASED FILTER	S Mondal (South Africa)
ROLE OF COUNTY GOVERNMENT IN WATER RESOURCES MANAGEMENT IN NAIROBI CITY COUNTY	H Chungani (Kenya)
IMPACTS OF WATER SCARCITY TO UTILITY'S REVENUE	S Kiarie (Kenya)
ASSESSING THE IMPACT OF ACCESS TO CLEAN WATER AND SANITATION ON BASIC EDUCATION: A CASE STUDY OF NORTHERN REGION OF KENYA	P Mwangi (Kenya)
EFFICIENT ENERGY MANAGEMENT AT NAIROBI CITY WATER AND SEWERAGE COMPANY "	E Wambura (Kenya)
WATER MANAGEMENT – SAVING WATER BY USING WATERLESS URINALS	H Chungani (Kenya)
IMPACTS OF WATER SCARCITY TO UTILITY'S REVENUE	A Ndegwa (Kenya)
MAKING INFORMATION ACCESSIBLE, TRANSPARENT AND UNDERSTANDABLE TO ALL CONSUMERS: LESSONS FROM NAIROBI'S WATER RATIONING CRISIS	D Mahemba (Kenya)
WATER MANAGEMENT	M Buke (Kenya)
ACTIVATION OF CONSUMER INTERESTS AND INTERACTION THROUGH SOCIAL MEDIA	C Supeyo (Kenya)

Poster Session Two

TUESDAY, 12 DECEMBER 2017

Title	Presenter
NUTRIENT REMOVAL FROM LOW STRENGTH DOMESTIC SEWAGE USING ANAEROBIC HYBRID REACTOR	A Aziz (India)
WASTE TO BE REMOVED OR VALUE TO BE REUSED? ADVANCED UTILIZATION OF ORGANIC CARBON RICH PROCESS AND WASTE WATER FLOWS OF SOFT DRINK INDUSTRY	V Bakos (Hungary)
TROUBLESHOOTING LONG-TERM BIOFOULING BY DISPERSED BACTERIA IN FULL-SCALE MEMBRANE BIOREACTOR	A Carlson (United States)
INVESTMENT ON MEMBRANE TECHNOLOGY FOR TREATMENT OF TRADE EFFLUENT FOR SECONDARY RE-USE: CHANGING THE WEAKNESS INTO STRENGTH	M Cele (South Africa)
SPATIAL AND TEMPORAL VARIABILITY OF PROKARYOTIC COMMUNITIES IN RAPID SAND FILTERS USED FOR DRINKING WATER TREATMENT	M Crous (South Africa)
FITTING MICROBIAL HEALTH RISK ASSESSMENTS TO URBAN WASTEWATER REUSE SYSTEMS IN LOW AND MIDDLE INCOME COUNTRIES	S Fuhrmann (South Africa)
UNDERSTANDING INDUSTRIAL EFFLUENT WATER QUALITY: WHAT IS THE NORM AND WHY DO WE NEED TO DO BETTER?	G Harding (South Africa)
ASSESSING THE IMPROVEMENT IN BIOLOGICAL STABILITY OF DRINKING WATER AFTER REVERSE OSMOSIS AND REMINERALIZATION	A Moekwa (South Africa)
THE OCCURRENCE AND REMOVAL OF MICROPOLLUTANTS IN A DECENTRALIZED WASTEWATER TREATMENT SYSTEM IN DURBAN, SOUTH AFRICA	J Späth (Sweden)
REMOVAL OF CHROMIUM SPECIES FROM INDUSTRIAL EFFLUENTS USING CRYPTOCRYSTALLINE MAGNESITE: KINETIC AND ISOTHERM STUDIES	F Tjia (South Africa)
HINULUGANG TAKTAK WASTEWATER SYSTEM PROJECT IN ANTIPOLO: REVIVING ONE OF THE PHILIPPINE'S NATURAL HERITAGE	M Umali (Philippines)
DETERMINING THE EFFECTIVENESS OF AN EXPANDED GRANULAR SLUDGE BED (EGSB) REACTOR IN THE TREATMENT OF POULTRY SLAUGHTERHOUSE WASTEWATER	Y Williams (South Africa)
PERFORMANCE EVALUATION OF DOWN-FLOW EXPANDED GRANULAR BED REACTOR (DEGBR) IN POULTRY SLAUGHTERHOUSE WASTEWATER TREATMENT	M Njoya (South Africa)
THE USE OF SMALL-SCALE CONSTRUCTED WETLANDS TO TREAT GREYWATER IN RESIDENTIAL HOUSEHOLDS FOR USE IN ACTIVITIES THAT REQUIRE NON-POTABLE WATER	S Stelli (South Africa)
CATCHMENT MANAGEMENT GUIDELINES AND TRAINING	L Lodenkemper (South Africa)
URBAN WETLANDS ARE OVERWHELMED BY STORMWATER QUALITY: THE CASE OF PRINCESS VLEI, CAPE TOWN	L Underhill (South Africa)
INVESTIGATING TREATED EFFLUENT QUALITY FROM VARIOUS WASTEWATER TREATMENT WORKS; CAN IT DIRECTLY AUGMENT THE WESTERN CAPE'S DRINKING WATER SUPPLY SYSTEM	S Thandokazi (South Africa)
POTENTIAL FOR LAKE BANK FILTRATION AT LAKE TISSOE, DENMARK	F Kohn (Denmark)
TAILORING THE PHOTO-CATALYTIC POTENTIAL OF NANOSIZED MAGNETITE THROUGH GRAPHENE OXIDE DOPING – A NOVEL APPROACH TO EFFICIENT POLLUTANT'S REMEDIATION IN WATER STREAMS	M Zahid (Pakistan)
DO SIZE AND SURFACE COATING INFLUENCE ADSORPTION OF GOLD NANOPARTICLES BY AQUATIC HIGHER PLANTS?	N Mahaye (South Africa)
ACID ORANGE 52 REMOVAL USING IMMOBILIZED PHOTOCATALYTIC BAFFLED REACTOR	B Ayati (Ireland)
EVALUATION AND MANAGEMENT OF AN IMPACT OF A TREATED SEWAGE WASTE WATER ON A BLESBOK SPRUIT RIVER AND WETLAND WATER QUALITY	M Baloi (South Africa)
HOW TO LIFT LIFESPAN OF WASTEWATER TREATMENT PLANTS THROUGH A NEW MAINTENANCE REGIME?	F Filo (Albania)
STATISTICAL CROSS EVALUATION OF FAECAL SLUDGE IN DIFFERENT REGIONS	P Jaenicke (South Africa)

Poster Session Three

WEDNESDAY, 13 DECEMBER 2017

Title	Presenter
AN INVESTIGATION OF THE ERROR RESULTING FROM LINEARLY UPSCALING THE PERFORMANCE OF A "TYPICAL" OF DOMESTIC RAINWATER HARVESTING SYSTEM TO THE CATCHMENT SCALE	L Fisher-Jeffes (South Africa)
CHEMICAL ANALYSIS OF THE PROTEIN, LIPID AND CARBOHYDRATE COMPOSITION OF FAECAL SLUDGE FROM URINE DIVERSION DRY TOILETS AS A FEED SOURCE FOR BLACK SOLDIER FLY LARVAE	D Hamilton (South Africa)
MICROALGAE CULTIVATION USING VARIOUS SOURCES OF ORGANIC SUBSTRATE FOR HIGH LIPID CONTENT	H Kamyab (Malaysia)
APPLICATION OF MULTIPLE REGRESSION ANALYSIS IN PROJECTING THE WATER DEMAND FOR THE CITY OF CAPE TOWN	M Lawens (South Africa)
BIOMONITORING USING A FEMALE-SPECIFIC HORMONE WITHIN FRESHWATER CRABS	L Leach (South Africa)
EFFECTS OF SELECTED WASTEWATER EFFLUENT DISCHARGE ON ENVIRONMENTAL AND BIOLOGICAL CONDITIONS OF THE VYGEKRAAL AND KUILS RIVERS DOWNSTREAM OF ATHLONE AND ZANDVLIET WWTWs RESPECTIVELY	F Mugatywa (South Africa)
DETERMINATION OF ORGANIC POLLUTANTS IN THE BLESBOKSPRUIT, GAUTENG	K Maphakela (South Africa)
HUMAN FAECES AS A POTENTIAL BIO-REFINERY FEED-A-REVIEW	E Mary (South Africa)
EVALUATION OF SALINITY RISKS TO THE RIVER ECOSYSTEM IN RELATION TO AGRICULTURE PRACTICES AND DOMESTIC WASTEWATER DISCHARGE IN THE KAT RIVER	N Mgaba (South Africa)
DIVERSITY AND DYNAMICS OF THE BACTERIAL COMMUNITY ASSOCIATED WITH A WATER DISTRIBUTION NETWORK RECEIVING LIMITED TREATED GROUND WATER	K Moodley (South Africa)
THE EVALUATION OF THE VARIATION IN FLOW AND COD OVER A 24-HOUR PERIOD AT A WASTEWATER PLANT, PRESENTING A POSSIBLE OPPORTUNITY TO MINIMISE TOTAL USE OF ENERGY	L Motaung (South Africa)
MODELLING THE IMPACT OF LID MEASURES ON REDUCTION OF CSO OF THE NEW MAELBEEK	S Muhirirwe (Uganda)
PRELIMINARY MASS BALANCE AT A BLACK SOLDIER FLY LARVAE FAECAL SLUDGE TREATMENT FACILITY IN DURBAN, SOUTH AFRICA	E Mutsakatire (South Africa)
VERTICAL CONSTRUCTED WETLANDS PERFORMANCE IMPROVEMENT – COMPARISON OF DIFFERENT MEDIA GRADE CURVES	R Mwenje (South Africa)
ANALYSIS OF GROUNDWATER HISTORICAL DATA TO DETERMINE THE TRENDS OF LEAD, MANGANESE AND IRON: A CASE STUDY OF BROOKLANDS, SIMON'S TOWN	S Nethenzheni (South Africa)
PARTICIPATION AND LEARNING IN WATER QUALITY MANAGEMENT: A CASE OF MPOPHOMENI, KWAZULU-NATAL, SOUTH AFRICA	T Rimau (South Africa)
DEVELOPMENT OF AN ALGORITHM TO IMPROVE WATER AND SANITATION DATA COLLECTION IN DISPERSED RURAL COMMUNITIES IN MEXICO USING R SOFTWARE	JR Hernandez (Spain)
THE CONFIGURATION OF THE EAST RAND BASIN SURFACE RUNOFF MODEL USED FOR SOURCE APPORTIONMENT STUDIES	A van Schalkwyk (South Africa)
ARE HIGH FLOWS ACCURATELY MEASURED IN SOUTH AFRICAN RIVERS?	A Maritz (South Africa)
SPATIAL VARIABILITY OF ARSENIC CONCENTRATIONS AND GROUNDWATER RESOURCES VULNERABILITY IN GOLD MINING FIELDS OF LAKE VICTORIA BASIN, NORTHERN TANZANIA	J Ijumulana (Tanzania)
HIGH FLUX AND ANTIFOULING PROPERTIES OF PES/GO-(MOF-2) COMPOSITE MEMBRANES FOR DYE REJECTION	T Makhetha (South Africa)
SEASONAL INFLUENCE OF NATURAL ORGANIC MATTER (NOM) CHARACTER ON TRIHALOMETHANE (THM) FORMATION USING MOLECULAR SIZE DISTRIBUTION	S Marais (South Africa)
ADSORPTION OF CYANIDE IN SIMULATED WASTEWATER BY QUATERNIZED POLYMERIC ADSORBENTS	T Masinga (South Africa)
REMOVAL OF HEAVY METAL IONS FROM INDUSTRIAL EFFLUENT USING ADSORBENT RESINS	L Nemadodzi (South Africa)
EXPANDED POLYSTYRENE IN WATER SOFTENING TECHNOLOGIES	L Odud (Ukraine)
SCHAAKLE SHUFFLE ENSEMBLE METHOD FOR RAINFALL POST PROCESSES FORECAST	A Taiwo (South Africa)
ILLEGAL WASTEWATER DISCHARGE AND THE PLIGHT OF SEWER WORKERS: A CASE STUDY OF NAIROBI CITY WATER AND SEWERAGE COMPANY	P Olali (Kenya)
STORMWATER FOR URBAN USE BY MICROFILTRATION AND ULTRAFILTRATION TREATMENT	AO Sandoval (Brazil)
COMMUNICATION AND MARKETING TOOLS USED TO IMPROVE SERVICE PERFORMANCE-A CASE OF NCWSC	Z Sugale (Kenya)

Networking and Social Events



THE WATER OLYMPICS – PRE-CONFERENCE ICE BREAKER

Sunday, 10 December 2017

12:00 – 17:00

The Water Hub, Franschhoek

ABOUT

Instead of a traditional evening cocktail function following registration, the IYWPC will head out to The Water Hub, a research, innovation, and training centre under development in Franschhoek (just outside of Cape Town). The Water Hub will be the setting for the first, and possibly the most exciting, networking event: The Water Olympics. All (willing) participants will be placed in teams which will compete against each other in various interactive games involving, or related to, water. This is certainly going to be a fun day of good-spirited competition, and a great way to break the ice and get networking!

The Water Olympics is included in registration fees, all conference participants are invited to attend.

TRANSPORT

Coaches will begin departing from outside the CTICC on Walter Sisulu Avenue from 12:00. It is recommended that all participants travel to The Water Hub on the coaches provided.

FOOD AND DRINK

Lunch will be served and soft drinks and snacks will be available throughout the day. Be sure to bring along your own water bottle which you'll be able to refill.

RECOMMENDED DRESS / HOW TO PREPARE

Be sure to wear comfortable clothes and shoes. As you might've guessed from the name, there's a chance you'll get wet, so maybe bring a change of clothes as well.



GALA COCKTAIL

Wednesday, 13 December 2017

19:00 – 23:00

Atlantic Imbizo, Clock Tower Centre, V&A Waterfront

ABOUT

After the Closing Ceremony it will be time to relax and enjoy an evening of socialising and getting to know YWPs from around the world (the ones you don't know already!). Instead of a typical sit-down conference dinner, the IYWPC is holding a Gala Cocktail which will allow guests to network and socialise with ease. A truly memorable evening is in store at the Atlantic Imbizo. It promises to be an evening of good food, great views, and valuable networking!

TRANSPORT

Coaches will begin departing from outside the CTICC on Walter Sisulu Avenue from 18:30. It is recommended that all participants travel to Atlantic Imbizo on the coaches provided, but if you prefer to take your own car, parking at the V&A Waterfront is plentiful but will be for your own account.

FOOD AND DRINK

Exquisite cuisine served a la small bowl and finger-fork style will be on offer throughout the evening. Limited beer, wine, and soft drinks will be served and a cash bar will be available.

RECOMMENDED DRESS

Smart casual, with something warm in case there is a breeze.

YOUNG PROFESSIONALS GUIDE TO SPEED-DATING POTENTIAL EMPLOYERS

For some of you this may be the first time that you will get to interact with several different companies in the water sector. This guide aims to provide you with information about the Career Fair as well as guidance in preparing for your interaction with the companies at the Career Fair and for real-world interviews.

The Career Fair is a fantastic opportunity to gain as much knowledge as you can on the job interview process. Companies will ask you questions that are typically asked in a job interview. Since this is not a real job interview, the questions will not be specific to a particular position but rather meant to get you to better present yourself, know what to expect, and get personalised feedback. You'll learn how to highlight your skills, strengths, passions and weaknesses and how to illustrate how you applied your skills and strengths to a situation, or used problem solving when in a difficult situation.

PROGRAMME

Opening Ceremony	12:50 – 13:20
Career Fair: Round 1	13:20 – 14:20
Intermission	14:20 – 14:45
Career Fair: Round 2	14:45 – 16:35
Panel Discussion and Closing Plenary	16:45 – 17:30



What to Expect

- A day full of networking, capacity building, and professional development.
- Networking with a mixed group of potential employers, mentors and peers.
- A platform to showcase your potential, skills, experience, and educational qualifications.
- Engagement with companies in the water sector and getting information by asking questions in an informal environment.
- Learning from your experience and improving as you progress through the session.
- Feedback on how to improve your performance in future interviews.

Top Interview Questions

1. What project would you consider your most significant career accomplishment to date?
2. Tell me about a time you set a difficult personal or professional goal.
3. Tell me something about yourself.
4. If you had R100 000 to build your own business, what would you do?
5. Is it better to be perfect and late, or good and on time?
6. Why should someone hire you?
7. What's the biggest decision you've had to make in the past year? Why was it so big?
8. What are your strengths and weaknesses?
9. What have you done professionally that is not an experience you'd want to repeat?
10. What is something you'd be happy doing every single day for the rest of your career?
11. Who is the smartest person you know personally? Why?
12. In five minutes, could you explain something to me that is complicated, but you know well?
13. Tell me about a time you messed up at work.
14. What's your definition of hard work?
15. What are your career aspirations?
16. What achievements are you most proud of?
17. Describe the work environment in which you will most effectively be able to contribute.
18. What kind of oversight and interaction would your ideal boss provide?
19. What are the three most important attributes or skills that you believe you would bring to any company if they hired you?
20. What are the first three things you would do on a job if you were hired for a position?

EWSETA Career Fair

Questions You Should Ask

1. What skills and experiences would make an ideal candidate?
2. What constitutes success in your company by an employee?
3. What does a typical day look like?
4. What are the biggest challenges that an entry-level/mid-level candidate like me would face in your company?
4. What are the most important things you'd like to see someone accomplish in the first 30, 60, and 90 days on the job?
6. What is the typical work week? Can overtime be expected?
7. What are the biggest rewards of the job and working for this company?
8. How is success/performance measured in your organisation?
9. What can you tell me about this organisation that isn't widely known?
10. What is the key to success in this organisation?

Answering Tips

1. Maintain eye contact.
2. Avoid saying fillers such as "um", "basically", "actually", "so", etc.
3. Smile.
4. Be courteous and professional.
5. Tell stories. Always cite examples from your previous work experiences.
6. Try to stay calm.
7. Share your accomplishments.
8. Make a match.
9. Don't ramble.
10. Ask for clarification.
11. Be direct.

CONTACT

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Chair of the IYWPC 2017
Career Fair sub-committee
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Please note that YWP and EWSETA cannot guarantee that you will secure employment by participating in the Career Fair.



TIP #1

Don't forget to update your CV, make copies, and bring plenty to the conference.

Hand them out to relevant people during the conference.

TIP #2

Complete the business card templates provided in the conference handbook.

Hand them out at the conference. Ask others for their business cards and follow up with them after the conference

TIP #3

Bring a notepad and a few pens and note down key points given by the "interviewer".

Technical Tours



TABLE MOUNTAIN DAMS TOUR

Thursday, 14 December 2017
07:30 – 13:00

ABOUT

Table Mountain is one of the New Seven Natural Wonders of the World and this tour will showcase this natural wonder as well as the technical feat of the construction of the reservoirs on top of the mountain. An expert team of guides will lead a hike up Table Mountain to look at two of the five dams on top. The history of these dams will be revealed along the way, with stops at the new and old pipe routes. You'll learn about the construction challenges and about the sources and colour of the water, among other stories about this magnificent mountain.

Technical aspects that will be covered include:

- Historical construction of reservoir walls
- Reinforcement options: buttressing, embankments, cable anchoring
- Cable anchoring construction methods, challenges, and lessons learnt

RECOMMENDED

Bring along a daypack, sunscreen, water, and a hat. Be sure to wear well-fitting and comfortable walking/hiking shoes. Participants need to be physically fit for this four-hour adventure. If you would like to purchase refreshments, there is a café and a shop at the top of the mountain.

TRANSPORT

A coach will be provided to transport participants to the start of the hike. Please meet in the CTICC Foyer at 07:15. The coach will depart from outside the CTICC on Walter Sisulu Avenue at 07:30. The hike will start at Constantia Nek and end at the lower Table Mountain cable car station on Tafelberg Road. A coach will be provided back to the CTICC after the hike. Participants are welcome to take the cable car down the mountain, instead of walking, at their own expense.



ROBBEN ISLAND HISTORY OF WATER INFRASTRUCTURE TOUR

Thursday, 14 December 2017
09:00 – 13:00

ABOUT

Robben Island is home to the prison where Nelson Mandela spent most of his imprisonment. It is a small island of five square kilometres located about seven kilometres offshore from Cape Town. This poorly-resourced island provided an opportunity for creative water infrastructure to be implemented. An expert in the history of the water infrastructure on Robben Island will accompany the island's history tour to provide an insightful view of South Africa's culture and water culture.

This tour will address the following technical aspects:

- History of Robben Island
- Water management strategy for the isolated community
- Practical water experiences from the facilities management

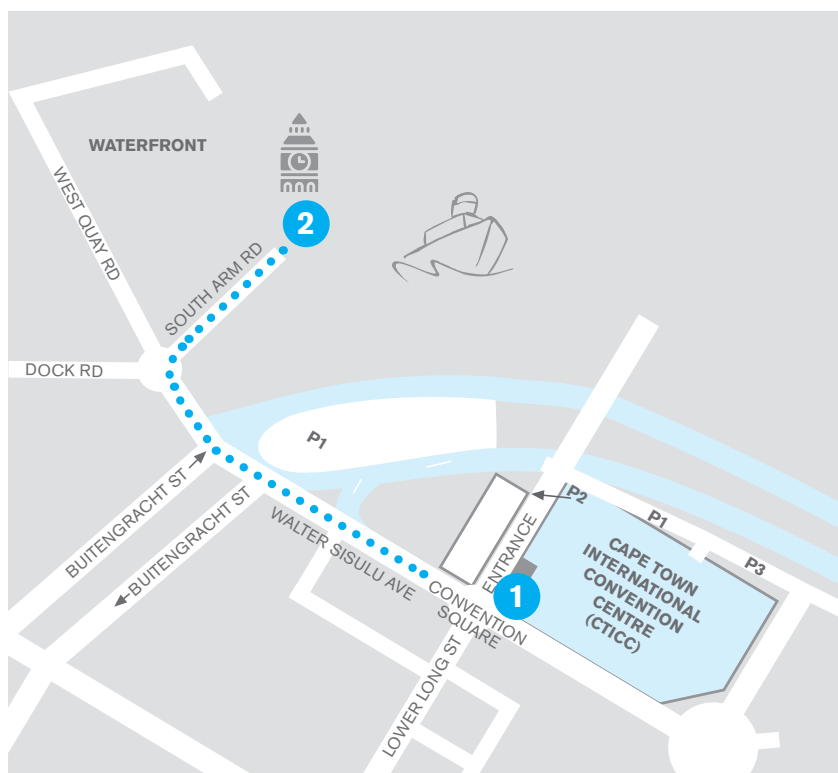
RECOMMENDED

Be sure to bring along a daypack, water, sunscreen, and a hat. Wear comfortable walking shoes. The tour involves a ferry trip to the island, a bus tour of the island and a short walk through the old prison.

TRANSPORT

Please meet at the Nelson Mandela Gateway to Robben Island ferry port and museum at the Clock Tower in the V&A Waterfront at 08:30 for a 09:00 ferry departure.

Technical Tours Map and Side Meetings



KEY

- 1 Table Mountain Dams Tour
- 2 Robben Island History of Water Infrastructure Tour

Side Meetings

IWA MEMBER MEETING

Date: Monday, 11 December at 17:30

Venue: MR 1.60

IWA YWP CHAPTER MEETING

Date: Wednesday, 13 December from 09:00 – 10:50

Venue: MR 2.64 – 2.66

MEET YOUR SOUTH AFRICAN YWP CHAPTER

Date: Wednesday, 13 December from 10:50 - 11:20

Venue: MR 2.64 – 2.66

SAREBI'S THINK WATER ENTERPRISE DEVELOPMENT PROGRAMME 2018

Date: Wednesday, 13 December from 14:00 – 15:30

Venue: MR 2.64 – 2.66



Information



BAG DONATIONS

If you choose not to keep your bag after the conference, it can be donated for redistribution to a school in a disadvantaged area. There will be a donation collection point at the registration area; please donate your unwanted bags before you leave.

BUSINESS CENTRE

The CTICC provides printing, faxing and photocopying services at its Exhibition Services Desk adjacent to Reception on Level 0. For more information about internet access, please see Wi-Fi.

CONFERENCE PHOTOS

A group photo of all participants will be taken in the passage outside Auditorium 2 and Marimba between 17:10 and 17:30 on Monday, 11 December 2017. We kindly request that all participants put on the white conference t-shirts given to them at registration. You are welcome to put your t-shirt on over your day clothes. The conference photo is a tradition for the YWP conferences, and we would love to have the biggest YWP conference photo yet for the 8th IWA YWP conference! Official conference photos will be made available on Dropbox to ensure that they can be easily accessed by all participants after the conference.

CONFERENCE STAFF

The Conference Organising Committee are wearing branded t-shirts. Staff members are wearing black and can be identified by their distinctive yellow Africa-shaped brooches. They will happily assist with any queries.

CONTINUOUS PROFESSIONAL DEVELOPMENT (CPD) POINTS

The conference is accredited for CPD and participants can earn one CPD point for each day of attendance. Participants who require documentary proof of their attendance at the conference will need to sign the

register at EACH session that they attend. A register will be available outside of EVERY venue. Please note that it is your responsibility to remember to sign the register at each and every session you attend.

The CPD attendance certificate will be emailed to you within eight weeks of attending the event.

LIABILITY

Participants are reminded that their participation in the 2017 International Young Water Professionals Conference and all associated events is on a voluntary basis only and entirely at their own risk. Neither IWA, WISA, YWP nor the organisers, African Agenda, will accept any responsibility in the case of an accident, injury or the loss of personal property.

LOCKERS

There are lockers available to participants (at own cost) and the public in the P3 basement parking. This is an electronic locker system and offers recharge facilities for mobile phones and laptops.

MEALS AND REFRESHMENTS

Refreshments (tea, coffee and snacks) will be served mid-morning and mid-afternoon in Strelitzia Conservatory on Level 0.

Lunch will be served cafeteria style from food stations with informal seating and standing areas in Strelitzia Conservatory on Level 0.

If you have indicated that you have special dietary requirements, your special refreshments or meals will have been arranged for you; please ask a member of the catering or Conference staff where to find them.

MEDICAL ASSISTANCE

A paramedic will be on duty during Conference hours and will be located in Auditorium 2 Foyer on Level 0. Do not hesitate to ask any member of the Conference staff if you need the assistance of the paramedic.

MOBILE PHONES

Mobile phones must be on silent during sessions.

NAME BADGES

Conference name badges and lanyards are 'tickets' to lunches, social functions and technical tours, and should be worn **at all times**, as you need to display them for entry. Please ensure that your bags are labelled to provide easier identification of belongings.

PRAYER ROOM

A prayer room is available on Level 0 in the CTICC's Registration Foyer.

Information

REGISTRATION DESK

The Registration Desk will be located in Auditorium 2 Foyer / Strelitzia Conservatory on Level 0. Registration will be open from 09:00 – 12:00 on Sunday, 10 December and thereafter the Registration Desk will be open during Conference hours:

Monday, 11 December: 07:30 – 17:00

Tuesday, 12 December: 07:30 – 17:00

Wednesday, 13 December: 07:30 – 16:30

The Registration Desk will be able to assist with all registration and payment enquiries.

For more in-depth online discussions, go to www.iwa-connect.org, login or register (you can choose not to become an IWA member straight away) and join the Young Water Professionals group. Here we aim to involve, engage, and share with a wider young water professionals group the insights and outcomes of the conference.

WI-FI

Free Wi-Fi will be available in all session venues and the exhibition area.

SOCIAL MEDIA

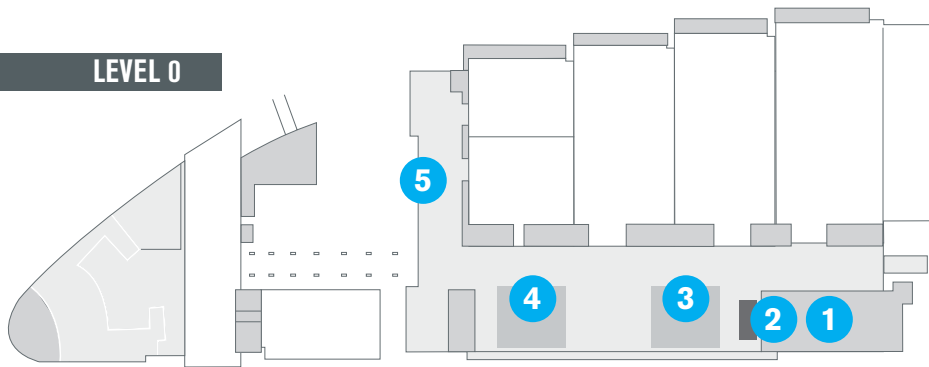
Participants are encouraged to use social media to post about what inspires you at the conference. Please use the hashtags #IYWPC and #Futurewaterleaders and the ats @YWP-ZA and @IWAYWP.



Floor Plan



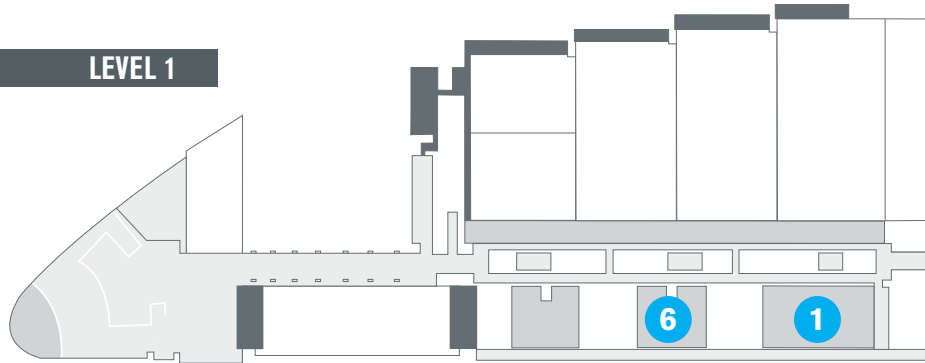
LEVEL 0



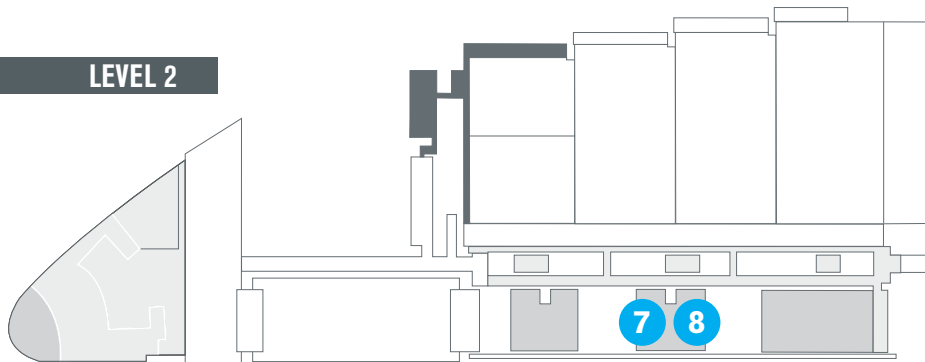
KEY

- 1 Auditorium 2: Plenary Venue
- 2 Registration
- 3 Strelitzia Conservatory and Restaurant Exhibition and Posters
- 4 Jasminum Conservatory Posters
- 5 CTICC Reception, Business Centre and Coffee Shop
- 6 MR 1.60
- 7 MR 2.61-2.63
- 8 MR 2.64-2.66

LEVEL 1



LEVEL 2



Notes

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Thank You

The 8th International Young Water Professionals Conference has been organised through the efforts of more than 40 Young Water Professionals from around the world, supported by an Advisory committee of Senior Academics and Professionals, and a Professional Conference Organiser (PCO). The YWPs volunteered their time and skills in the different committees shown below.

JOINT ORGANISING COMMITTEE

Kirsten De Vette	Netherlands
Lloyd Fisher-Jeffes*	South Africa
João Grilo	Netherlands
Nora Hanke-Louw	South Africa
Ashton Maherry	South Africa

LOCAL ORGANISING COMMITTEE

Rudi Botha	South Africa
Lloyd Fisher-Jeffes*	South Africa
Nora Hanke-Louw	South Africa
Magalie Kanana	South Africa
Niel Ramsay Louw	South Africa
Ashton Maherry	South Africa
Suvritha Ramphal	South Africa
Vanessa Weber	South Africa
Kevin Winter**	South Africa
Stuart Wooley	Germany / South Africa

SPONSORSHIP AND FUNDING SUB COMMITTEE

Ivo Arrey	South Africa
Machaya Chomba	South Africa
Lloyd Fisher-Jeffes	South Africa
Nora Hanke-Louw	South Africa
Londiwe Satimburwa	South Africa
Vanessa Weber*	South Africa

COMMUNICATIONS SUB COMMITTEE

Preyan Arumugam-Nanoolal	South Africa
Lloyd Fisher-Jeffes	South Africa
Niel Ramsay Louw*	South Africa
Ashton Maherry	South Africa
Mbia Eloundou Boris	Cameroon
Elaheh Rastegari	Iran
Fisher John Sekabira	Uganda
Laura Underhill	South Africa
Yang G. Villa	Philippines

CAREER FAIR SUB COMMITTEE

Magalie Kanana*	South Africa
Lloyd Fisher-Jeffes	South Africa
Sivuyile Pezulu	South Africa
Suvritha Ramphal	South Africa
Sipho Mashiya	South Africa

TECHNICAL TOURS AND SOCIAL PROGRAMME

Rudi Botha*	South Africa
Lloyd Fisher-Jeffes	South Africa
Mosa Makutsoane	Lesotho
Guzene O'Reilly	South Africa

PROGRAMME COMMITTEE

Norhayati Binti-Abdullah	Malaysia
Kirsten De Vette**	Netherlands
Nikki Funke	South Africa
Yussuf Hussein	Kenya
Arlinda Ibrahimllari	Albania
Christian Loderer	Austria
Ashton Maherry*	South Africa
Aisha Manmade	Portugal
Lindelani Sibiya	South Africa
Randolph Webb	United States of America
Hiroshi Yamamura	Japan
Sebastian Riera Yankeliovich	Argentina

ADVISORY COMMITTEE

Patricia Bakir	Jordan
Tobias Barnard	South Africa
Jo Burgess	South Africa
Peter Cornel	Germany
Günter Langergraber	Australia
Brian McIntosh	Australia
Gertjan Medema	Netherlands
Gustaf Olsson	Sweden
Henry Roman	South Africa
Marion Savill	New Zealand
Michael Storey	Australia
Peter Vanrolleghem	Canada
Uta When	Netherlands
Kevin Winter	South Africa
Szilvia Szalóki	Hungary

* Committee Chair

** Advisory member

Reviewers

Achisa Mecha	South Africa	Louiza Duncker	South Africa
Adesola Adedugbe	Nigeria	Madonna Vezi	South Africa
Adolf October	South Africa	Małgorzata Szlachta	Poland
Aisha Mamade	Portugal	Markus Engelhart	Germany
Ajith Edathoot	India	Marta Carvalho	Portugal
Amos Branch	Australia	Mesenbet Sebaht	Ethiopia
Annina Takala	Finland	Michelle Vogts	South Africa
Arlinda Ibrahimllari	Albania	Mihir Herlekar	India
Armando Guevara	Peru	Musa Mlambo	South Africa
Ashton Maherry	South Africa	Nikki Funke	South Africa
Atheesha Singh	South Africa	Nonhlangabezo Mabuba	South Africa
Bettina Genthe	South Africa	Nonjabulo Prudence Gule	South Africa
Brigitte Melly	South Africa	Pabel Cervantes	Mexico
Christian Loderer	Austria	Pabla Tognoli	Argentina
Christian Schaum	Germany	Pao-Wen Liu	Taiwan
Chu-Ching Lin	Taiwan	Petros Muchesa	South Africa
Craig Sheridan	South Africa	Pieter Crous	South Africa
Dyllon Randall	South Africa	Richard Meissner	South Africa
Elaheh Rastegari	Iran	Rickson Wachira Nyambura	Kenya
Emanuela Cappuccini	Italy	Rose Kaggwa	Uganda
Emmanuel Vellemu	South Africa	Scholastica Ngari	Kenya
Enoch Owusu-Sekyere	South Africa	Sebastian Riera	Argentina
Eveline Volcke	Belgium	Shakera Arendze	South Africa
Happymore Mbiza	Zimbabwe	Shen-Yi Chen	Taiwan
Hiroshi Yamamura	Japan	Shingi Chimuti	South Africa
Hoang Nhat Phong Vo	Vietnam	Soraya Malinga	South Africa
Hosea Arito	Kenya	Stephen Nyende-Byakika	South Africa
Hulisani Rananga	South Africa	Takashi Onodera	Japan
Hussam Hussein	United Kingdom	Tobias Barnard	South Africa
Imran Jalalkhan	Kenya	Valentine Uwamariya	Rwanda
Ivan Kozyatnyk	Sweden	Vipin Singh	India
Ivan Mrnco	Slovakia	Wan-Ru Chen	Taiwan
Jay Bhagwan	South Africa	Xiaojun Chang	United States
Kris Villez	Switzerland	Yen-Ching Lin	Taiwan
Lee Boyd	South Africa	Yi-Li Lin	Taiwan
Lisa Schaefer	South Africa	Yussuf Noor Hussein	Kenya
Liudmyla Odud	Ukraine	Zuo Tong How	Australia
Lloyd Fisher-Jeffes	South Africa		

