

| TIME (HRS) | Theme 1: Delivering Water From Source to Tap | | Theme 2: Effective And Efficient Wastewater Value Management | | Theme 3: Water For Liveability And Resilience | Theme 4: Water Quality & Health |
|------------|---|--|---|--|---|--|
| | (A) Network <i>CASSIA 3203, LEVEL 3</i> | (B) Treatment <i>CASSIA 3201AB, LEVEL 3</i> | (A) <i>CASSIA 3301AB, LEVEL 3</i> | (B) <i>CASSIA 3303, LEVEL 3</i> | <i>BEGONIA JR 3211, LEVEL 3</i> | <i>CASSIA JR 3212, LEVEL 3</i> |
| 11.30 AM | <p>[1A.1] Network of The Future Chairs: Michael Toh, PUB (Singapore); Hamanth Kasan, Rand Water (South Africa)</p> <p>11.30 AM: Planning for the Future Water Network – K. Vairavamorthy, International Water Association (the Netherlands)</p> <p>11.45 AM: Transition from Intermittent to Continuous Water Supply – D. Duccini, A. Mokssit. SUEZ (France)</p> <p>12.00 PM: Smart Water Network for Water Quality Optimisation – G. Booth, J. Cooper. Arcadis (UK)</p> <p>12.15 PM: Earthquake Resilient: Keeping Water Flowing to 400,000 People Following a Major Earthquake in Wellington – A. Cameron, M. Kinvig. Cardno NZ (New Zealand)</p> | <p>[1B.1] Hybrid Advanced Oxidation Process Chairs: Shane Snyder, NEWRI (Singapore); TBC</p> <p>11.30 AM: Study the Efficacy of UV AOPs to Improve Resilience of NEWater Treatment Processes – J. Scheideler, H. Stapel, A. Ried, M. Tan, Y. Zhang, E. Wong, P. C. Siow, E. Huang, P. W. Chue, K. Chua, F. K. Chwee, B. Viswanath, R. Hu, L. Zhang, Y. H. Leong, A. K. Puah, M. H. Lim. Xylem Services GmbH (Germany)</p> <p>11.45 AM: Effect of Membrane Pore Size and Material on Catalytic Reaction in Hybrid System of Ozone/Ceramic Microfiltration – M. He, J. Hu. National University of Singapore (Singapore)</p> <p>12.00 PM: Alternative Treatment Strategy with Ceramic Membrane for Wastewater Reuse – R. Floris, S. Gabriel, J. Zheng, G. Galjaard. PWNT (the Netherlands)</p> <p>12.15 PM: Safe and Sustainable Reuse in New Mexico (USA) Through Ozone-Based AOP – J. Scheideler. Xylem (USA)</p> | <p>[2A.1] Membrane-based Wastewater Treatment Chairs: Pascal Dauthuille, SUEZ (France); Ng How Yong, NUS (Singapore)</p> <p>11.30 AM: Commissioning and Demonstration Study of Low Energy Step-feed Membrane Bioreactor for Water and Resource Recovery – G. Tao, J.T. Yen, J. Li, C. Htoo, A. M. Ang, S.C. Chua, Y. L. Wah, K. E. Ooi, H. Seah. PUB (Singapore)</p> <p>11.45 AM: Reusable Water and Biogas from A Sustainable Mainstream Anaerobic Treatment of Municipal Wastewaters – P. Dauthuille, L. Rodríguez-Hernández, A. Silva-Teira, T. Reyes, C. Lardín, N. Moya, J. Garrido. SUEZ (France)</p> <p>12.00 PM: Advanced and Efficient MBR Integration of Two Giant WWTP in the Megacities of Beijing and Paris: The Huai Fang and Achères Projects – S. Donnaz, C. Roche, P. Luchon, Y. Yang, M. A. Sanz. SUEZ International Treatment Infrastructure (France)</p> <p>12.15 PM: Algal Versus Conventional Wastewater Treatment: Comparison of Microbial Communities – H. M. Delanka-Pedige, N. N. Khandan, S. P. Munasinghe-Arachchige, Y. Zhang. New Mexico State University (USA)</p> | <p>[2B.1] Flood, Drainage & Sewer Management Chairs: Adel Hagekhalil, Bureau of Sanitation, City of Los Angeles (USA); Stéphanie Rinck-Pfeiffer, Global Water Research Coalition (Australia)</p> <p>11.30 AM: Taming Stormwater – Now and into the Future – M. Ong, PUB (Singapore)</p> <p>11.45 AM: Asset Management and IT master planning – S. Arora. Halifax Water (Canada)</p> <p>12.00 PM: Improving Flood Management in Metro Manila – J. Stoutjesdijk. World Bank (USA)</p> <p>12.15 PM: Interceptor and River Water Treatment for the River of Life, Kuala Lumpur, Malaysia – P. Von Huben, S. Chan. Jacobs (Australia)</p> | <p>[3.1] Sustainable Development Goals Chairs: Leong Ching, Institute of Water Policy, LKYSPP, NUS (Singapore); Bert Palsma, Stowa - Foundation for Applied Water Research (the Netherlands)</p> <p>11.30 AM: Moral Dimensions of Resilience in Integrated Urban Systems – P. Brown, S. Trussell. Paul Redvers Brown Inc. (USA)</p> <p>11.45 AM: Water-Food Security Resilience for Southeast Asia: Climate Change Alarms for Extremes? – S. Y. Liong, Z. Jiang, J. Hur, S. Raghavan. TMSI, National University of Singapore (Singapore)</p> <p>12.00 PM: Water's Essential Role in Achieving the Sustainable Development Goals – L. Werbeloff, B. Rogers, C. Chesterfield, J. Ewert. Monash University (Australia)</p> <p>12.15 PM: Playing Our Part to Achieve the SDGs – C. Flew, T. Muller, R. Wheen. WaterAid (Cambodia)</p> | <p>[4.1] Policy and Regulatory Framework for Drinking Water Quality Chairs: Indira Chakravarty, Government of West Bengal (India); Annemarie van Wezel, KWR Watercycle Research Institute (the Netherlands)</p> <p>11.30 AM: Policy and Regulation across the 6 SDG6 Targets – R. Bos, Water, Sanitation, Environment and Public Health (Switzerland)</p> <p>11.45 AM: Regulatory Policies in Monitoring Emerging Contaminants and Antimicrobial Resistance – S. Koo-Oshima. U.S. EPA (United States)</p> <p>11.55 AM: Improving Drinking Water Safety in Regional New South Wales, Australia – L. Jarvis, S. Leask, W. Henderson, T. Carr, J. Tickell, K. Wall, Z. Bradford-Hartke, P. Byleveld. NSW Health (Australia)</p> <p>12.05 PM: Influence of Land Development on Variability of Fecal Indicator Bacteria and Total Suspended Solids Concentration in Stormwater Runoff in Mixed Land Use and Land Cover Catchment – M. C. Paule-Mercado. Myongji University (Korea)</p> <p>12.15 PM: A Comprehensive Assessment of Level of Service Based on Risk – F. Cubillo. Canal de Isabel II (Spain)</p> |
| 1.00 PM | LUNCH @ LEVEL 3 | | | | | |
| 2.00 PM | <p>[1A.2] Smart Network Chairs: Darryl Day, International Centre of Excellence in Water Resources Management (Australia); TBC</p> <p>2.00 PM: Intelligent Water Network – South Australia's Case – R. Cheroux. SA Water (Australia)</p> <p>2.15 PM: Smart Water Network and Future Plan – T. W. Kok. PUB (Singapore)</p> <p>2.30 PM: Strategic Cleaning Solution for Water Networks – D. Duccini, D. Sinapah, T. VanBeelaere. SUEZ (France)</p> <p>2.45 PM: Ensuring Stable Water Supply by Centralized Administrative Control Over a Large-scale Water Supply Network – H.</p> | <p>[1B.2] Natural Organic Matter Chairs: Gary Amy, NUS; Clemson University (Singapore; USA); Rob Renner, Water Research Foundation, USA</p> <p>2.00 PM: Influence of NOM on Post-Filtration Treatment – H. Shorney-Darby, I. Caltran. PWNT (the Netherlands)</p> <p>2.15 PM: Characteristics of The Specific UV Absorbance at 254 Nm (SAC(254)) and Selected Applications Related to Water Treatment And Safety – A. Rodenberg. SWAN Analytical Instruments AG (China)</p> <p>2.30 PM: The Use of Membrane Technology for NOM Removal in Scotland – S. Sutherland. Scottish Water (UK)</p> | <p>[2A.2] Membrane Biofilm Reactor Chairs: Andrew Shaw, Black & Veatch (USA); David Jenkins, University of California, Berkeley (USA)</p> <p>2.00 PM: Leveraging MABR Technology for Short-cut Nitrogen Applications: Demonstration Testing at the Ejby Mølle WWTP – T. Constantine, P. H. Nielsen, N. Uri, J. Sandino, A. Willoughby. Jacobs (Canada)</p> <p>2.15 PM: MABR Goes Full-Scale: Design & Implementation of The World's Two Largest MABR Plants – J. Peeters, M. Di Pofi, D. Houweling, J. Ireland, C. Owerdieck. SUEZ Water & Solutions (Canada)</p> | <p>[2B.2] Deep Tunnel System Chairs: David Rager, American Water Works Association (USA); TBC</p> <p>2.00 PM: Effective and Efficient Used Water Management System – W. H. Yong. PUB (Singapore)</p> <p>2.15 PM: Singapore Deep Tunnel Sewerage System Phase 2, Hydraulic – D. Brocard, Black & Veatch AECOM Joint Venture (Singapore)</p> <p>2.30 PM: Drone Technologies for Maintenance of Deep Tunnel System Where There's No GPS Navigation – F. Wang. AeroLion Technologies Pte Ltd (Singapore)</p> | <p>[3.2] Regenerative Water Services Chairs: Glen Daigger, IWA; ASCE; WEF; University of Michigan (USA); Paul Reiter, Reiter International Water Solutions Ltd (Hong Kong)</p> <p>2.00 PM: Applying Adaptation Pathways and Robust Decision Making in Strategic Planning of Critical Water Systems in the Face of Change and Uncertainty – P. H. von Lany, B. Korteling. Jacobs (UK)</p> <p>2.15 PM: Enhancing Liveability in the Dutch Delta by Combining Highway Developments with A Blue Green Corridor and Advanced Wastewater Reuse, A Success Story – J. Boorsma, O. Helsen, A. Spanjers. Delfland Regional Water Authority (the Netherlands)</p> | <p>[4.2] Protection, Monitoring and Evaluation of Source Water Quality Chairs: Robert Bos, (Switzerland); Laurence Haller, NUS (Singapore)</p> <p>2.00 PM: Assessing Source Water Quality – M. Savill. Affordable Water Ltd (New Zealand)</p> <p>2.15 PM: Simulated Pathogen Survival in Open Canals Under Changing Flow Conditions in Singapore – N. Shome, S. Wuertz. NTU (Singapore)</p> <p>2.25 PM: Disinfection of Drainage Pumps as Unconventional Point Sources of Contamination for Bathing Waters – A. Carducci, I. Federigi, A. Landucci, G. Donzelli, R. Iannelli, C. Pretti, F. Tardelli, V.</p> |

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| | <p>Taniguchi. Bureau of Waterworks, Tokyo Metropolitan Government (Japan)</p> | <p>2.45 PM: Innovative Approach to Preventing RO Fouling Caused by Humic Substances – K. Imai, C. Shimpo. Kurita Water Industries (Japan)</p> | <p>2.30 PM: Anaerobic MBR for Self-sufficient Sewer Mining and Water Reuse – F. Rogalla, FCC Aqualia (Spain)</p> <p>2.45 PM: Membrane Biofilm Reactor (MBfR) – J. Keller, CRC for Water Sensitive Cities (Australia)</p> | <p>2.45 PM: TARP - Flood Alleviation & Water Quality – T. Kunetz. Metropolitan Water Reclamation District of Greater Chicago (USA)</p> | <p>2.30 PM: Water Management in Smart City: Case Study of Faridabad, India – S. Shekhar, A. Mukherjee, S.N. Dwivedi, S. Shekhar. Ministry of Water Resources, RD & GR (India)</p> <p>2.45 PM: Toward Best Practices for Increasing Public Understanding of Water Reuse – M. Meeker, L. Macpherson, I. Law, J. Minton. Brown and Caldwell (USA)</p> | <p>Casu, M. Verani. University of Pisa (Italy)</p> <p>2.45 PM: Monitoring Water Quality in Singapore Reservoirs with Hyperspectral Remote Sensing Technology – S. C. Liew, C. K. Choo, T. C. Dang. NUS (Singapore)</p> <p>2.55 PM: Ecological System Analysis: An Integral Approach for Sustainable Water Quality Management – G. Kruitwagen, S. H. Wee. Witteveen+Bos Consulting Engineers (the Netherlands)</p> |
| 3.30 PM | TEA BREAK @ LEVEL 3 FOYER | | | | | |
| 4.00 PM | <p>[1A.3] Network Condition Assessment Chairs: Wong Meng King, PUB (Singapore); Martin Lambert, University of Adelaide (Australia)</p> <p>4.00 PM: New Approaches to Pipe Condition Assessment Using Pressure Transients – M. Lambert. University of Adelaide (Australia)</p> <p>4.15 PM: Water Network Renewal in Singapore: A Risk Based Approach – G. Booth, T. Qiu. Arcadis (UK)</p> <p>4.30 PM: How Much Data Is Enough? Financial Optimization of Condition Assessment Spending to Support Pipeline Replacement Decisions – K. Laven, F. Boyle, R. Diemel, P. Murray. Echologics (Canada)</p> <p>4.45 PM: Identifying Explanatory Variables of Failures for Asset Lifetime Models Construction – F. Cubillo, P. Gómez-Martínez. Canal de Isabel II (Spain)</p> | <p>[1B.3] Treatment of Emerging Contaminants Chairs: Jonathan Clement, the Netherlands; Vernon Snoeyink, University of Illinois (USA)</p> <p>4.00 PM: Delivering Water from Source to Tap: Engineered Nanomaterials – Unregulated Compounds of Concern? – I. Law. IBL Solutions (Australia)</p> <p>4.15 PM: Advanced Oxidation for Control of Micropollutant from Rhine River, North Holland – B. Martijn. PWNT (the Netherlands)</p> <p>4.30 PM: Status Quo of Micropollutant Removal in Central Europe – A. Ried, L. Dinkloh, T. Puehmeier, A. Wieland, H. Stapel. Xylem Services GmbH (Germany)</p> | <p>[2A.3] Shortcut Biological Nutrient Removal Chairs: Sudhir Murthy, NEWhub (USA); Andrew Williams, Clay Township Regional Waste District (USA)</p> <p>4.00 PM: High-rate C capture, aerobic granulation, deammofication and the application of physical selectors – B. Wett, AraConsunt (Austria)</p> <p>4.15 PM: A Pilot-scale Membrane Bioreactor Plant Incorporating Mainstream Nitritation-denitritation Process for Municipal Used Water Reclamation – H. Wang, G. Xu, Z. Qiu, Y. Zhou, H. Png, W. Lay, B. Kwok, Y. Liu. NTU (Singapore)</p> <p>4.30 PM: Achieving Long-term and Stable Mainstream Nitritation for Municipal Wastewater: A Sustainable NOB Repression for Shortcut Nitrogen Removal and Mainstream – M. Caligaris, I. Mozo, T. Saur, G. Gaval, B. Barillon. SUEZ (France)</p> <p>4.45 PM: Taking Mainstream Deammonification out of the Box and into Practice - Sustainable Water Reuse Using an Anammox Biofilter – S. Sathyamoorthy, H. Park. Black & Veatch (USA)</p> | <p>[2B.3] Sensors for Smart Wastewater Management Chairs: Frank Rogalla, FCC Aqualia (Spain); TBC</p> <p>4.00 PM: Identification and Management of Industrial Wastewater Emissions by Smart Sensing and Real-time Communication – A. Weingartner. Scan Messtechnik GmbH (Austria)</p> <p>4.15 PM: Microbial Electrochemical Sensor (MES) For Real-time Detection of Heavy Metals Present in Used Water – H. Y. Ng, S. Kharkwal, C. H. C. Trung, E. M. H. Tan, K. K. Liao, Y. Gu. National University of Singapore (Singapore)</p> <p>4.30 PM: A Smart Unmanned Aerial Vehicle (UAV) Based Imaging System for Inspection of Deep Hazardous Tunnels – C. H. Tan, M. Ng, D. Sufiyan Bin Shaiful, K. H. Win, W. J. Ang, H. B. Lim, S. K. Yeung, M. Do, S. Foon. Singapore University of Technology & Design (Singapore)</p> <p>4.45 PM: Smarter Management of Waste Water Treatment Plant 360° Performance – P. Dauthuille, P. Blanc. SUEZ (France)</p> | <p>[3.3] Water Sensitive Urban Design Chairs: Rob Skinner, Monash University (Australia); Steve Moddemeyer, CollinsWoerman (USA)</p> <p>4.00 PM: Global Best Practice in Water Sensitive Urban Design – M. Fletcher. Arup (UK)</p> <p>4.15 PM: Soul of Nørrebro - Innovative Climate Adaptation Process as an Instrument for Increased Urban Quality and Resiliency at A District Scale – C. N. Nielsen. Ramboll (Denmark)</p> <p>4.30 PM: The Integration of Critical Facilities and Infrastructure Hardening and Longer Term Resiliency Strategies in the New York City and New Jersey Region – E. Westerhof. Arcadis U.S. Inc. (United States)</p> <p>4.45 PM: Applying the Water Sensitive City Framework for Climate Adaptation in the North Sea Region: First Impression from the CATCH Project – N. Dolman, S. Lijzenga, G. Özerol, H. Bressers, M. Böge, H. Bormann. Royal HaskoningDHV (the Netherlands)</p> | <p>[4.3] Metagenomics Chairs: Frederic Leusch, Griffith University (Australia); Koo-Oshima, Sasha, USEPA (USA)</p> <p>4.00 PM: Overview of Metagenomics Applications in Water Industry – P. Hong. King Abdullah University of Science and Technology (Saudi Arabia)</p> <p>4.15 PM: Characterization of Resistomes in Wastewaters and Surface Waters Using Metagenomics – H. Chen, C. Ng, M. Tay, B. Tan, L. Haller, K. Gin. NUS (Singapore)</p> <p>4.25 PM: Combined Metagenomics and Metatranscriptomics Approaches in Studies of Biological Wastewater Treatment – Z. Tong. University of Hong Kong (Hong Kong)</p> <p>4.35 PM: Antimicrobial Resistance Work Plan – A. Wester. WHO/Water, Sanitation, Health (Switzerland)</p> |

