

Final Program

CIB W062 2026 Maribor

Water Supply and Drainage for Buildings

Day 1 – 18.8.2026

Vladimir Bračič Hall, University of Maribor

07:30–08:30 · Registration

08:30–08:50 · Opening Ceremony

08:50–09:05 · Group Photo

Session 1 – Extended Abstracts I: Sustainable Water Systems and Net-Zero Buildings

09:05–10:00

Chairs: Prof. Michael Gormley & Prof. Zuzana Vranayová

Ref	Presenter	Title
E8	Takahiko Suzuki	Development of Urban Biodiversity through Water-Based Biotope Creation in a Building Site
E13	Toyohiro Nishikawa	Investigation of Water Balance in Alternative Water Use Buildings
E17	Haru Yamaguchi (online)	Residential Resilience to Flood Disasters: Continuity of Living Functions and Building Services
E21	Ryuki Koike	A Study on the Expansion of Non-Potable Water Use in Buildings
E37	Satoshi Matsumoto	Study on Design Methods for ZWB in Environmentally Sustainable Urban Mid-Sized Office Building (Part 1): Measurement of Water Balance and Identification of Challenges for Achieving ZWB
E39	Masaaki Hashimoto (online)	Development of a Small-Scale Water Circulation System Supplying Both Potable and Non-Potable Water for Zero Water Buildings (Part 1): System Overview and Basic Performance
E45	Sei Yoshioka	Study on Design Methods for ZWB in Environmentally Sustainable Urban Mid-Sized Office Building (Part 2): Water Quality Investigation and Case Study of Water Balance
E55	Gabriela Cristina Ribeiro Pacheco	Analyzing Urban Water Demand under Varying Rainwater Tank Volumes
E62	Martina Zelenakova	Analysis of Green Roof Application to Buildings
	Discussion (10 min)	

Coffee 10:00–10:20

Session 2 – Water Conservation, Reuse and Net-Zero Water

10:20–12:20

Chairs: Mr. Walter van der Schee & Prof. Janja Kramer Stajnko

Ref	Presenter	Title
R4	Daniel Cole	Potable Water Reuse in the USA: Regulations and Treatment Technologies
R6	Kyrah L. Williams (online)	A City's Stress Reliever: A Study on the Optimization and Reallocation of Municipal Demand through Conservation Efforts
R43	Cheng-Li Cheng	Study on BIM and Dynamo-based Automated Life Cycle Carbon Assessment of Unit Bathrooms
R44	Takeshi Aoi	Planning Case Study and Verification of a Research Facility Aimed at Achieving a Net-Zero-Water Building
T12	Timothy Bartrand (online)	Water Management during Construction
T35	Kosuke Osako	Method for Calculating Underground Infiltration Based on Actual Water Level Measurements in Rainwater Storage and Infiltration Tanks
R42	Cheng-Li Cheng (Huang Shi-Feng)	Simulation Research on Patterns Optimization Strategies of Building Rainwater Harvesting System
	Discussion (15 min)	

Lunch 12:20–13:15

Note: Extended abstracts (E) – 5 min | Research papers (R) & Technical papers (T) – 15 min

Session 3 – Water Demand and Distribution Systems

13:15–15:00

Chairs: Prof. David A. Kelly & Prof. Martina Zelenáková

Ref	Presenter	Title
R15	Colin Jacques	Comparative evaluation of simplified pipe sizing methods for non-looped domestic water distribution systems in a Belgian context
R18	Muhammad Bilal (online)	Data Driven Assessment of Water Demand and Pressure in an Australian Multilevel Residential Building
T28	Toju Omaghomi (online)	An Analysis of Water Use Data in Healthcare Buildings
R10	Mirjam Blokker	Updated Review of Applications for SIMDEUM, a Stochastic Drinking Water Demand Model with a Small Temporal and Spatial Scale
R54	James Gong	Pressure Monitoring in Residential Plumbing Systems in Victoria, Australia
R3	Carla Pimentel-Rodrigues	Flush Cisterns: Water Conservation versus Drainage Performance
	Discussion (15 min)	

Coffee 15:00–15:20

Session 4 – Domestic Hot Water Systems and Legionella

15:20–17:05

Chairs: Mr. Daniel Cole & Prof. Masayuki Otsuka

Ref	Presenter	Title
R7	Walter van der Schee	The Proportional Deviation of Thermostatic Balancing Valves in Hot Water Circulation Systems
T9	Rolf Weiss	Temperature-dependent Legionella Growth for Water Changes in Drinking Water Systems
T30	Onno Leever	Stagnation in Drinking Water Installations: The Role of Cold Water Circulation in Robust Design
R56	Joris Van Herreweghe	Towards Legionella-safe Low Temperature DHW Production: Potential of Physical Techniques in a Contaminated System
T2	Christoph Lohr (online)	Optimizing Thermostatic Balancing Valve Placement in Domestic Hot Water Recirculation Systems: Product Ratio Method Analysis of Thermal Performance and Hydraulic Efficiency
R11	Andreas Moerman	Development and Validation of a Legionella Test Setup for Low Temperature Domestic Hot Water (DHW)
	Discussion (15 min)	

End of Day 1 · 17:05

Day 2 – 19.8.2026

Vladimir Bračič Hall, University of Maribor

Session 5 – Extended Abstracts II: Building Services Performance and Energy
08:30–09:15
Chairs: Prof. Armando Silva Afonso & Prof. Hiroyuki Kose

Ref	Presenter	Title
E14	Natascha Milesi Ferretti	Measuring Pressure Loss in Modern Plumbing Fittings
E19	Takeru Tamiya	Study on Reduction of Hot Water Energy Consumption in Hospital Facilities Using Building Service Databases
E20	Misuzu Shima	Optimization of System Configuration and Operational Control for the Energy Performance of Hybrid Water Heaters
E53	Hana Nekrep	Digital Water Load: Integrating the Hidden Water Footprint of Generative AI into Building Water Assessments
E34	Ryo Fujimoto	Calculation of Energy Consumption in Large Public Baths – Part 1: CFD Analysis of the Amount of Evaporative Heat Loss at the Surface of the Water in the Bathtub
E64	Kazuki Yuki	Study on Simulation of Building Drainage Systems by CFD – Part 5: Investigation of CFD Analysis Accuracy for Siphonic Drainage Systems
E65	Drew Rich	Integrating Head Loss Calculations into Network-Based Simulation of Water Supply Systems
Discussion (10 min)		

Coffee 09:15–09:35

Session 6 – Drainage Performance and Components
09:35–11:35
Chairs: Prof. Cheng-Li Cheng & Prof. Carla Pimentel-Rodrigues

Ref	Presenter	Title
R5	Steve Wright	Compensating for Reduced Flush Volumes: Restoring Solid Transport in Sanitary Drainage Systems Through Increased Pipe Gradient
R22	Tsuyoshi Suruki	Performance Evaluation Method of Self-Sealing Trap Part 2: Characteristics of a Compact Umbrella-shaped Self-Sealing Trap Applicable to Horizontal and Vertical Fixture Drainage Piping
T23	Hibiki Hasemi	Pressure Resistance Performance and Allowable Discharge Capacity of Multi-Inlet Floor Gullies
R25	Tsang Tsz Wun	Impact of Kitchen Food Waste Grinders on Blockage Risk and Water Use in High-Rise Drainage Systems
R40	Wan-Ju Liao	Hydrodynamic Characteristics Analysis of the T-CORE Special Fitting Drainage and Venting System
T36	Tomoya Kono	Proposal of Renovation Method for Drainage-Stack Systems in High-Rise Residential Buildings and Verification of Drainage Performance
T48	Jose David Cuellar Sedie	Advances in benchmark HRB DWV system testing at the National Lift Tower: Recent updates to protocols and procedures, towards improved standards alignment
Discussion (15 min)		

Sponsor Session
11:35–11:50

Ref	Presenter	Title
S1	Denis Sejfić	Geberit

Lunch 11:50–12:45

Session 7 – Drainage Design, Modelling and Monitoring

12:45–14:30

Chairs: Dr. Ling-Tim Wong & Mr. John Lansing

Ref	Presenter	Title
R58	David A. Kelly	An Exploratory Analysis and Contextualization of Water Trap Seal Loss in Building Drainage Systems
R59	Michael Gormley	Modelling Approaches to Produce Design Guidance – TM 70: Tall Building Drainage Design
T63	Nick Post	Drainage Roof Vent Distance from Fresh Air Ventilation Inlet in the Netherlands
R60	Michael Gormley (Thilini Waniganettige)	Measurement of Real Wastewater Flows in Building Drainage Systems
R52	John Lansing	An examination of the influence of 19th century disease theory on the design of sanitary drainage systems – Sewer intercepting traps
R61	Michael Gormley (Jake Bavin)	Near-source Monitoring of Pathogens in Building Drainage Systems
	Discussion (15 min)	

Coffee 14:30–14:50**Session 8 – Public Health, Water Quality and Urban Resilience**

14:50–16:35

Chairs: Mr. Bart Bleys & Prof. Jeffrey Lee

Ref	Presenter	Title
R1	Janja Kramer Stajanko	Evaluating Urban Fire Water Supply Resilience with Hydrant Networks and Mobile Supply Strategies
T16	Zuzana Vranayova	Integrated Risk Assessment of Legionella Proliferation in Cold Drinking Water Systems: A Hospital Case Study
R26	Ayaka Kimura	Comparison of Droplet Dispersion Among Three Types of Hand Dryers
T46	Jeffrey Lee	Assessment of Current Status and Maintenance Strategies for Public Toilets in Taiwan
R50	Ao Koyama	Study on the Number of Sanitary Fixtures Required to Improve Conditions in Women's Restrooms
R57	Leonie Wilson	Impact of Shower Drains on Infection in Healthcare Buildings: Prevention & Control Strategies through Design & Operation
	Discussion (15 min)	

Closing of the Symposium

16:35–16:50

Ref	Presenter	Title
	Mr. Bart Bleys	Closing words
	Prof. Masayuki Otsuka	Presentation of the host of next year's Symposium

End of Day 2 · 16:50