

Monday 19th August 2024:

17.00-18.30 Scientific committee meeting (Invite only from Lynne Jack) @ conference hotel

19.00-20.00 Planning meeting committee (if you normally attend or 2 people from each organization) @ conference hotel

Dinner 20.00-21.00

Day One: Tuesday 20th August 2024:

08:30-09:00: Event registration

09:00-09:15: Opening Address by Steven White Aliaxis

Technical session: Innovations in Drainage System Performance (09:15-10:45)

Chairs: **L.B. Jack and L.T. Wong**

1. Influence of Solid Matter Stuck in Horizontal Toilet Drainpipe on Sewage Carrying Performance: **Hironori Takayama**, Masayuki Otsuka (09:15-09:30)

2. Exploring the Air Pressure Fluctuations around Toilet Flush in Building Drainage Systems: **Edwin Chung-Hin Dung**, Yuguo Li (09:30-09:45)

3. Method for Measuring Drainage Flow Rate in Building Drain: Kyosuke Sakaue, **Takehiko Mitsunaga**, Hiroyuki Makabe, Hiroshi Iizuka (09:45-10:00)

4. Study on simulation of building drainage systems by CFD: Tomomasa Ichikawa, **Shizuo Iwamoto**, Ryo Fujimoto, Kyosuke Sakaue, Takehiko Mitsunaga (10:00-10:15)

Q&A (10:15-10:45)

10:45-11:15: Coffee break

Technical session: Advances in Water Supply and Demand Management (11:15-13:00)

Chairs: **W. van der Schee, M. C. Jeffrey Lee**

5. Modelling the Influence of District Heating Systems on Drinking Water Temperatures in Domestic Drinking Water Systems: **E.J.M. Blokker**, B.H. Hillebrand (11:15-11:30)

6. The Challenges of Data Sourcing and Data Analysis of Non-Residential Water Use Data: **Toju Omaghomí**, Daniel Cole (11:30-11:45)

7. Dynamic simulation estimating method for domestic hot water supply in residential building: **Ke-Tsung Huang**, Cheng-Li Cheng (11:45-12:00)

8. Applying AI and Machine Learning for Enhanced Drinking Water Demand Forecasting in Urban Settings: Hana Nekrep, **Matjaž Nekrep Perc**, Jožica Dobaj (12:00-12:15)

9. Estimating peak water demand using Neural Networks: **S.T. Fernandez**, L.B. Jack, S.C. Dass (12:15-12:30)

10. Study on the instantaneous and hourly maximum water supply prediction coefficients for hourly average predicted water supply based on the analysis of simulation technique in office buildings: **Saburo Murakawa**, Kazuhiko Sakamoto, Hiroshi Takata, Daisuke Ikeda (12:30-12:45)

11 Water demand loading; assessing commonly adopted principles for reliability of delivery.: **L.B. Jack**, S. Fernandez, S. Dass (12:45-13:00)

Q&A (13.00-13.15)

13:15-14:00: Lunch

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Technical session: Optimization and Testing of Drainage Systems (14:00-15:30)
Chairs: Z. Vranayová, A. Silva-Afonso
12. Study on Optimization of Drainage System Planning in Residential Building: Chia-Chun Chang , Cheng-Li Cheng (14:00-14:15)
13. Development of a test methodology for the verification of system design at the commissioning stage of tall building drainage systems: M. Gormley (14:15-14:30)
14. Prediction for water volume of toilet flushing based on human excretion behaviours: Hiroshi Takata , Saburo Murakawa, Kazuhiko Sakamoto, Daisuke Ikeda (14:30-14:45)
15. Assessing UV-LED performance in reducing airborne pathogens in drainage vent discharge: Tsang TW , Mui KW, Wong LT, Cheng TH (14:45-15:00)
16. An Experimental Study of Continuous Flow and Discharge Events in an Unvented High-Rise Wastewater Stack: Colin Stewart (15:00-15:15)
Q&A (15:15-15:30)

15:30-16:00: Coffee break

Technical session: Sustainable Water Solutions and Technologies (16:00-17:15)
Chairs: : D.A. Kelly, T.W. Tsang
17. Safe water supply - old problems, new ways: D. Káposztásová, Z. Vranayová (16:00-16:15)
18. Dispersion of Droplets and Aerosols Generated by Use of Hand Dryer: Ayaka Kimura , Masayuki Otsuka (16:15-16:30)
19. Water saving design and near-zero water consumption feasibility for buildings: Sadahico Kawamura , Cheng-Li Cheng (16:30-16:45)
20. Circular water use: case study for three housing types: N. Post (16:45-17:00)
21. Cold Drinking Water by Active Cooling: J. van Wolferen, W.G. van der Schee (17:00-17:15)
Q&A 17.15-17.30

17.30 : Conference day one ends

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Day Two 21st August:

Technical session: Sustainable Practices in Building and Water Management (08:30-10:00)

Chairs: **Saburo Murakawa, Dan Cole**

22. Feasibility study for ZWB on sustainable office: **Kosuke Osako**, Katsuhiko Shibata, Naoki Aizawa (08:30-08:45)

23. Zero emission on green building landscape water demand balance evaluation model and planning strategy: Cheng-Li Cheng, **Yu-Ti Kang** (08:45-09:00)

24. Analyzing the interplay between design and economic factors on rainwater harvesting system viability: **M. A. S. Campos** (09:00-09:15)

25. Reuse potential of drainage water from construction sites: **B. Bleys**, J. Van Herreweghe, K. Dinne, L. Vos (09:15-09:30)

26. Current status and issues regarding the number of sanitary fixtures installed in Japan: **H. Kose** (09:30-09:45)

Q&A (09:45-10:00)

10:00-10:30: Coffee break

Technical session: Innovative Approaches to Water Usage and Conservation (10:30-12:45)

Chairs: **C. Pimentel-Rodrigues, M. Gormley**

27. Survey on the actual usage and verification of the accuracy of the dynamic cold and hot water supply loads calculation method of public bathroom in university student dormitories: **Mina Hosoi**, Takehiko Mitsunaga, Mori Shunta, Saburo Murakawa, Kojima Kuniharu, Daisuke Ikeda (10:30-10:45)

28. Water balance and zero-water rating on university campuses using alternative water: **T. Nishikawa** (10:45-11:00)

29. Research on energy consumption and carbon emissions of residential building hot water systems in Taiwan: Cheng-Li Cheng, **Hsuan-Mao Huang**, Yen-Yu Lin (11:00-11:15)

30. Opportunities for conserving drinking water in sports facilities. Case studies: C. Pimentel-Rodrigues, **A. Silva-Afonso** (11:15-11:30)

31. Global net-zero water building trends and examination of case study of research facility in Japan: **Anna Fujita**, Masayuki Otsuka, Takeshi Aoi (11:30-11:45)

32. Investigation of domestic water saving devices for using comfort and water consumption: **M. C. Jeffrey Lee**, C.Y. Chen (11:45-12:00)

Q&A (12:00-12:15)

12.30- 12.45: Main sponsor speech

13:00-14:00: Lunch

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Technical session: Cutting-Edge Research in Drainage and Wastewater Systems (14:00-15:45)

Chairs: **W. van der Schee, Saburo Murakawa**

33. Treatment methods for onsite alternate water treatment systems: Part One: **Dan Cole** (14:00-14:15)

34. Detecting and locating blockages in sewers and drains using the reflected wave technique: **D.A. Kelly**, M.R. Garden, K.S. Sharif, D.P. Campbell, M. Gormley (14:15-14:30)

35. Comparative analysis of international building water and drainage codes: Estimating design flow rates and system performance implications: **S. Mohammed**, M. Gormley (14:30-14:45)

36. The influence of sewer network airflows on the air flow and air pressure regime in building drainage systems: Mechanisms and modelling: **K.S. Sharif**, M. Gormley (14:45-15:00)

37. Study on the quality of treated greywater: **J. Van Herreweghe**, T. Delwiche, L. Vos, B. Bleys (15:15-15:30)

38. Addressing the challenges of an unpredictable future: The need for updated international standards for onsite wastewater treatment and disposal systems: **Austin Perry**, Esber Andiroglu (15:30-15:45)

Q&A (15:45-16:00)

16.00-16:15: Coffee break

Technical session: Emerging Trends in Water Heating and Supply Systems (16:15-17:15)

Chairs: **M. Gormley, M. C. Jeffrey Lee**

39. Managing expansion in storage water heating systems: **R. G. Wakefield**, W. S. Webley, G. Looman (16:15-16:30)

40. Study on update of water supply load calculation method using water supply units in Japan: **Takehiko Mitsunaga**, Masayuki Otsuka (16:30-16:45)

41. A review of recommended velocities in domestic hot water return piping: **J. S. Lansing** (16:45-17:00)

42. Impact of showering settings on occupants' thermal sensation: A field study in residential bathrooms: D. Zhang, **L-T Wong**, W-L Chan, K-W Mui (17:00-17:15)

43. Residential drainage system pipeline arrangement optimization using convolutional neural networks: **Yen-Yu Lin**, Cheng-Li Cheng (17:15-17:30)

Q&A (17:30-17:45)

17:45-17:55: Aliaxis demo of smart platform (using research academic research into usable design tools) Steve White

17:55-18:10: Closing by Prof Lynne Jack

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**International Council
for Research and Innovation
in Building and Construction**

Day 3 22nd August

Aliaxis Highrise Research Centre at the NLT, technical visit and Silverstone racetrack.

Groups will be allocated at the symposium

Morning session	Time	Location	Time	Location
Group: 1	09.00-10.30	NLT	10.30-12.00	Free time
Group: 2	09.00-10.30	Free time	10.30-12.00	NLT
Group: 3	09.00-12.00	Silverstone		
Group: 4	09.00-12.00	Silverstone		
Lunch at hotel for all groups				
	12.00-13.00	At hotel		
Afternoon session	Time	Location		
Group: 1	13.00-16.00	Silverstone		
Group: 2	13.00-16.00	Silverstone		
Group: 3	13.00-14.30	NLT	14.30-16.00	Free time
Group: 4	13.00-14.30	Free time	14.30-16.00	NLT

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Transport:		
DAY 1 20th August		
Morning:		
Pick up	Pick up	Drop off
Hilton @ 07.45	Marriot @ 08.00	Mercure @ 08.15
Afternoon:		
Pick up	Drop off	Drop off
Mercure @ 17.30	Marriot @ 17.45	Hilton @ 17.55
Dinner:		
Pick up	Pick up	Drop off
Hilton @ 18.45	Marriot @ 19.00	Mercure @ 19.15
Pick up	Drop off	Drop off
Mercure @ 22.00	Marriot @ 22.25	Hilton @ 22.35

Accompany Persons:	
Bicester village	
Morning:	
Pick up	Drop off
Mercure @ 10.00	Bicester @ 11.05
Afternoon:	
Pick up	Drop off
Bicester @ 15.00	Mercure @ 16.05

Day 2 21st August		
Morning:		
Pick up	Pick up	Drop off
Hilton @ 07.45	Marriot @ 08.00	Mercure @ 08.15
Afternoon:		
Pick up	Drop off	Drop off
Mercure @ 17.55	Marriot @ 18.20	Hilton @ 18.30
Dinner:		
Pick up	Pick up	Drop off
Hilton @ 19.00	Marriot @ 19.15	Mercure @ 19.30
Pick up	Drop off	Drop off
Mercure @ 22.00	Marriot @ 22.25	Hilton @ 22.35

Accompany Persons:
London Day Trip
Leave Mercure 08.20
Depart from Northampton Train Station 08.48
Return London Euston 15:56 arrive back to Northampton 16:55.

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Day 3 22nd August

Morning:		
Pick up	Pick up	Drop off
Hilton @ 08.15	Marriot @ 08.30	Mercure @08.45
Afternoon:		
Pick up	Drop off	Drop off
Mercure @ 16.20	Marriot @ 16.35	Hilton @ 16.45

Gala Dinner:		
Pick up	Pick up	Drop off
Hilton @ 18.00	Mercure @ 18.20	Sedgebrook @ 18.50
Marriot @ 18.00	Mercure @ 18.20	Sedgebrook @ 18.50
Return:		
Pick up	Drop off	Drop off
Sedgebrook @ 23.00	Mercure @ 23.30	Hilton @ 00.00
Sedgebrook @ 23.59	Mercure @ 00.30	Marriot @ 00.50

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