

7<sup>th</sup> International Conference on Sewer Processes and Networks  
Preliminary Conference Programme

<b>Tuesday the 27<sup>th</sup> of August</b>	
16:00	Registration opens
17:30 – 19:00	Sewer Processes and Networks Working Group Meeting
19:00 – 20:00	Informal drinks reception
<b>Wednesday the 28<sup>th</sup> of August</b>	
8:00-10:00	Registration opens
8:30	Conference opening speech
8:40	Keynote speech <b>Sewer Processes in the Rear-view Mirror and through the Windscreen</b> Thorkild Hvitved-Jacobsen
<b>Session 1: Design and operational aspects</b>	
9:50	<b>Risk assessment of sewer condition using artificial intelligence tools: Application to the SANEST sewer system</b> <u>V. Sousa</u> , J. P. Matos, N. Almeida, J. Saldanha Matos
10:10	<b>Choice infrastructure: non-engineering strategies for behaviour change around domestic water and sewerage use</b> <u>P. G. Raven</u> , J. Machell, J. Boxall
10:30	Coffee break
<b>Session 2: In sewer processes</b>	
11:00	<b>Colonisation of Sulfide and Methane-producing biofilms during sewer start up</b> <u>J. Batista</u> , O. Auguet, M. Pijuan, C. Borrego, O. Gutierrez
11:20	<b>Hydrogen sulfide gas emission at turbulent conditions – an experimental approach for free-fall drops</b> <u>N. M. Matias</u> , J. S. Matos, J. Alves, F. Ferreira
11:40	<b>Reduced Sulfur Compounds (RSCs) in the Atmosphere of Sewer Networks in Australia: Geographic Variations</b> <u>B. Wang</u> , E.C. Sivret, G. Parcsi, N.M. Le, S. Kenny, H. Bustamante, R.M. Stuetz
12:00	<b>Estimate the sulfide accumulation and control in sediment of sewer system</b> <u>Yanchen Liu</u> , Chen Wu, Qian Dong, Xiaohong Zhou, Hanchang Shi
12:20	<b>Global sensitivity analysis of an in-sewer process model for the study of sulfide-induced corrosion of concrete</b> <u>B.M.R. Donckels</u> , S. Kroll, M. Van Dorpe, M. Weemaes
12:40	Lunch – Sponsored by Clear Environmental
<b>Session 3a: Sewer system Impacts</b>	
14:00	<b>Life Cycle Assessment of urban wastewater systems: identifying the importance of the environmental impacts of sewer systems</b> <u>O. Gutierrez</u> , P. Roux, E. Risch, C. Boutin, L. Corominas
14:10	<b>Effects of sewer conditions on the dissipation of illicit drug residues and metabolites in wastewater</b> <u>G. Jiang</u> , P. K. Thai, W. Gernjak, Z. Yuan, J. F. Mueller
14:20	<b>Integrated operation strategy of sewer system and WWTP based on the flow control coupled with the evaluation of wastewater quality variation</b> He Jing, <u>Yanchen Liu</u> , Mingkai Zhang, Yong Qiu, <u>Hanchang Shi</u>
14:30	<b>Response of algae to sewer misconnection effluents</b> <u>D. M. Chandler</u> , P. H. Warren, L. L. Maltby, D. N. Lerner
14:40	<b>Electrochemical sulfide abatement in sewer networks: towards practical implementation</b> <u>I. Pikaar</u> , J. Keller, K. Rabaey, Z. Yuan

<b>Session 3b: Design and Operational Aspects</b>	
14:00	<b>A new 'critical' storm profile for use in urban drainage modelling</b> <b>P. Davies</b> , L. Hancock
14:10	<b>Simple modifications in a CSO chamber with highly supercritical conditions to assess the discharge using only water level measurements</b> <b>S. Isele</b> , M. Dufresne, C. Tingaud, J. Vazquez
14:20	<b>Technical and economical evaluation of combined and separate sewerage systems due to different scenarios of topography, rainfall and population density</b> K. Boehler, <b>I. Volschan Jr.</b> , M.G. Miguez
14:30	<b>Strategies and Make or Buy Decisions in Sewer Operation and Maintenance</b> <b>Th. Ertl</b> , M. Wolf, H. Plihal, F. Kretschmer
14:40	<b>Bridging the gap between sewer status and new sewer inputs: A decision support tool to predict the effect of food waste disposers' effluent on small-diameter sewers</b> <b>J. Mattsson</b> , A. Hedström, M. Viklander
14:50	Coffee break
<b>Session 4: In-sewer processes</b>	
15:30	<b>Erosion resistance and behaviour of highly organic in-sewer sediment</b> <b>I. Seco</b> , M. Gómez Valentín, A. Schellart, S. Tait
15:50	<b>The impact of fat, oil, and grease deposits on the performance of sanitary sewers</b> <b>J. Dirksen</b> , E. J. Baars, J. G. Langeveld, F. H. L. R. Clemens
16:10	<b>Mobilized pollution indicators in a combined sewer system during rain events</b> H. Del Río, J. Suárez, J. Puertas, P. Ures, A. Jácome, <b>J. Anta</b>
16:30	<b>Assessment of the effects of greywater reuse on gross solids movement in sewer system</b> R. Penn, M. Schuetze, <b>E. Friedler</b>
16:50	<b>Describing Bacterial Community Variations in Combined Sewers</b> <b>H. S. Jensen</b> , R Sekar, F. Larrarte, A. M. Osborn, C. A. Biggs, S. J. Tait
17:50	Bus transfer to Kelham Island Museum
18:30 – 20:00	Drinks reception at Kelham Island Museum Sponsored by EMS

<b>Thursday the 29<sup>th</sup> of August</b>	
8:30 – 9:30	Registration
<b>Session 5: Monitoring and new technologies</b>	
9:00	<b>Impact of rainfall and model resolution on sewer hydrodynamics</b> <b>G. Bruni</b> , J.A.E. ten Veldhuis, F.H.L.R. Clemens
9:20	<b>Low cost method for determining occurrence and duration of combined sewer overflows</b> <b>A. Montserrat</b> , O. Gutierrez, M. Poch, Ll. Corominas
9:40	<b>Predicting CSO chamber depth using Artificial Neural Networks with rainfall radar data</b> <b>S. R. Mounce</b> , G. Sailor, W. Shepherd, J. Shucksmith, A. J. Saul
10:00	<b>Improving rainfall nowcasting and urban runoff forecasting through dynamic radar-raingauge rainfall adjustment</b> <b>S. Ochoa-Rodriguez</b> , M. A. Rico-Ramirez, S.A. Jewell, A. N. A. Schellart, , L. Wang, C. Onof and C. Maksimovic
10:20	<b>Combined sewer overflows in urban areas – interpreting and comparing European CSO monitoring results</b> <b>A. Aarts</b> , J. Langeveld, M.C. ten Veldhuis, L. Rietveld
10:40	Coffee break
<b>Session 6: Sewer system impacts</b>	
11:10	<b>Field-based quantification of the power of in-sewer treatment</b> <b>T. D. Evans</b> , M. Sandell, P. Andersson, Å. Wievegg
11:30	<b>Do faecal indicator organisms exhibit a first foul flush in combined sewers?</b> <b>W.J. Shepherd</b> , A.J. Saul, C.M. Stapleton, D. Kay, A. Phillips, D.N. Lerner, R.A. Falconer, B. Lin, G. Gao, G. Huang
11:50	<b>Estimation of Hydraulic Loads to Determine Pollutant Emissions from Urban Areas</b> <b>F. Kretschmer</b> , L. Kolla, G. Gruber, T. Hofer, M. Clara, G. Windhofer, C. Scheffknecht, T. Ertl
12:10	<b>The evaluation of rainfall influence on CSO characteristics: the Berlin case study</b> S. Sandoval, A. Torres, E. Pawlowsky-Reusing, M. Riechel, <b>N. Caradot</b>
12:30	<b>The semi-sewer river: hydraulic backwater effects and CSO reverse flows in Central Brussels now shown to reduce deoxygenation impact further downstream</b> <b>H.M. Le</b> , D. Petrovic, M.A. Verbanck
12:50	Lunch Sponsored by Atkins
<b>Session 7a: In-sewer Processes and Design and Operational Aspects</b>	
14:10	<b>Numerical modelling of air-water flow in a vertical drop manhole</b> <b>V. Sousa</b> , I. Meireles, J. Matos, M. C. Almeida
14:20	<b>Lumped and distributed modelling of suspended solids in a combined sewer catchment in Santiago de Compostela (Spain).</b> R. Hermida, <b>J. Anta</b> , H. Del Río, J. Suárez
14:30	<b>Requirements for quality of monitoring data for water quality based RTC</b> <b>P. van Daal-Rombouts</b> , J. Langeveld, F. Clemens
14:40	<b>Methods to accompany and evaluate planning of CSO treatment concepts for complex sewer systems</b> <b>K. Klepyszewski</b> , S. Seiffert, M. Regneri, E. Henry
14:50	<b>Visual inspection According to EN 13508-2/A1 – A Simplified Approach for Condition Assessment</b> <b>D. Schwarz</b> , F. Kretschmer, H. Plihal, T. Ertl
15:00	<b>A simulation model of storm water runoff with manhole cover blowouts and air compression in urban drainage sewer pipe systems</b> M. Watanabe, E. Tomochika, M. Azuma, Y. Sasaki, S. Sijapati, T. Fukuda, H. Nakano

<b>Session 7b: In sewer Processes</b>	
14:10	<b>Biofilm Development and Hydraulic Conditions in Sewers</b> <b>M.N. Pons</b> , F. Larrarte, X. France, L. Lebouc, D. Mabilais, P. Augris
14:20	<b>Definition of an appropriate cementitious material formulation for sewer networks</b> J. Herisson, M. Guéguen-Minerbe, E.D. van Hullebusch, T. Chaussadent
14:30	<b>Gaseous nitrous oxide emissions as an in-sewer toxicity early warning</b> <b>G. Black</b> , M. Jones, N. Johnson, A. Nocker, G. Dotro
14:40	<b>Effect of flow velocity on sulfide production by sewer biofilm</b> <b>K. R. Sharma</b> , N. Derlon, Z. Yuan
14:50	<b>A Novel Model for Sewer Ventilation</b> <b>E. D. Fuglsang</b> , A. H. Nielsen, J. Vollertsen
<b>Session 7c: Design and Operational Aspects and Monitoring and new Technologies</b>	
14:10	<b>Sewer network renovations – where and when to renovate</b> <b>T. Laakso</b>
14:20	<b>Bayesian model averaging approach for urban drainage water quality analysis</b> <b>G. Freni</b>
14:30	<b>A multiple lines of evidence approach to indicate capture of lost urban streams and springs in combined sewers</b> <b>A. T. Broadhead</b> , R. Horn, D. N. Lerner
14:40	<b>Local calibration for a UV/Vis spectrometer: PLS vs. SVM. A case study in a WWTP</b> A. Torres, M. Lepot, <b>J.-L. Bertrand-Krajewski</b>
14:50	<b>Effect of sewer network enlargement on sulfide and methane emissions: a case study</b> <b>O. Gutierrez</b> , J. Batista, K. R. Sharma, M. Pijuan
15:00	<b>Low cost on-line non-invasive sewer flow monitoring</b> <b>A. Nichols</b> , S. J. Tait, K. V. Horoshenkov, S. J. Shepherd, Yanmin Zhang
15:10	Coffee
<b>Session 8: Design and operational aspects</b>	
15:40	<b>A Bottom-up Approach to Estimate Dry Weather Flow in Minor Sewer Networks</b> <b>J. A. Elías-Maxil</b> , J. P. van der Hoek, J. Hofman, L. Rietveld
16:00	<b>Dynamics of pollutant discharge in combined sewer systems during rain events: chance or determinism?</b> A. Hannouche, G. Chebbo, C. Joannis
16:20	<b>Study and Practice in China of A New Sewer Inspection and Assessment Method Combining Hand-held Camera and Closed Circuit Television</b> <b>Y. J. WANG</b> , J. E. ZUO, G. INIAL, L. L. GAN, F. VINCE, G. D. BAO
16:40	<b>Physical and chemical parameters in wastewater and at the water-sediment interface in sewer network</b> T. Valeyre, B. Béchet, <b>F. Larrarte</b>
17:00	<b>Hydraulics Characteristics of Tipping Sediment Flushing Gate</b> <b>C.H.J. Bong</b> , T. L. Lau, A. Ab. Ghani
17:20	<b>Improvements in vortex flow control design to increase sewer network flood resistance</b> <b>C. J. Newton</b> , D. S. Jarman, F. A. Memon, R. Y. G. Andoh, D. Butler
18:20	Bus transfer
19:00	Conference dinner with drinks sponsored by Richard Allitt Associates Ltd

<b>Friday the 30<sup>th</sup> of August</b>	
8:30 – 9:30	Registration
<b>Session 9</b>	<b>Monitoring and new technologies</b>
9:00	<b>CCTV inspections: Quantification of protocol and inspector uncertainty</b> V. Sousa, <b>F. M. Ferreira</b> , I. Meireles, N. Almeida, J. Saldanha Matos
9:20	<b>Innovative Sewer Inspection as a Basis for an Optimised Condition-Based Maintenance Strategy</b> <b>H. Plihal</b> , F. Kretschmer, D. Schwarz, Th. Ertl
9:40	<b>Potential of laser scanning for assessing structural condition and physical roughness of concrete sewer pipes</b> <b>N. Stanić</b> , W.P.J. van der Schoot, B. Kuijter, J.G. Langeveld, F.H.L.R. Clemens
10:00	<b>Coupling acoustic devices to monitor combined sewer networks sediment deposits</b> I. Carnacina, <b>F. Larrarté</b>
10:20	<b>Effect of a deviation on flow rate measurements in sewer channel</b> A. El Bahlouli, C. Joannis and <b>F. Larrarte</b>
10:40	<b>URANS Approach for Open Channel Bifurcation Flows Modelling</b> <b>A. Momplot</b> , G. Lipeme Kouyi, E. Mignot, N. Rivière, J.-L. Bertrand-Krajewski
11:00	Coffee
<b>Session 10</b>	<b>Emerging issues and technologies</b>
11:30	<b>Misconnections to Surface Water Sewers in England and Wales: Are They a Serious Problem?</b> <b>J. B. Ellis</b>
11:50	<b>Brazilian Separate Sewerage Systems Expansion Faces the Challenge of New Alternative Engineering Solutions: How to Deal with Grit Contribution from Storm Sewers</b> <b>I. Volschan Jr.</b> , E.P. Jordão
12:10	<b>Sulfide control in sewers by intermittent dosing of free nitrous acid based chemicals: From scientific discovery to application</b> G. Jiang, A. Keating, S. Corrie, K. O'halloran, L. Nguyen, <b>Z. Yuan</b>
12:30	<b>Impact of sewage heat extraction on waste water treatment plant performance and greenhouse gas emission</b> K.R.L. De Gussem, R. Smits, <b>B.M.R. Donckels</b> , M. Weemaes
12:50	<b>Viability of Heat Recovery from Combined Sewers</b> <b>M. Abdel-Aal</b> , R. Smits, M. Mohamed, K. De Gussem, A. Schellart, S Tait
13:10	Lunch
<b>Session 11a: In sewer processes</b>	
14:00	<b>Demonstration of model parameter uncertainty of some common sewer sediment transport models</b> <b>M.G. Haile</b> , U. Dittmer, H. Steinmetz
14:10	<b>Numerical investigations on the influence of hydraulic boundary conditions on the efficiency of sewer flushing</b> <b>J. Schaffner</b> , J. Steinhardt
14:20	<b>Modelling the erosive effects of sewer flushing using different sediment transport formulas</b> <b>R.H.S.M. Shirazi</b> , A. Campisano, C. Modica, P. Willems, J. Berlamont
14:30	<b>Effect of on/off pumping strategy on sewer sediment behaviour elucidated by high frequency monitoring at the treatment plant inlet</b> <b>A. K. Sharma</b> , J. Alferes, L. Vezzano, C. Lamaire-Chad, C. Thirsing, P.A. Vanrolleghem, P.S. Mikkelsen
14:40	<b>Impact of reduced water consumption on sulfide and methane production in rising main sewers</b> <b>J. Sun</b> , S. Hu, K. Sharma, H. Bustamante, Z. Yuan

<b>Session 11b: In sewer processes and Monitoring and new Technologies</b>	
14:00	<b>Use of Rhodamine WT tracer experiments to check and validate <i>in-situ</i> flow meters</b> M. Lepot, G. Lipeme Kouyi, J.-L. Bertrand-Krajewski
14:10	<b>On the possibility of calibrating urban storm-water drainage models using gauge-based adjusted radar rainfall estimates</b> <b>S. Ochoa-Rodriguez</b> , L. Wang, N. Simões, C. Onof, C. Maksimovic
14:20	<b>Research into suitable storm water runoff model for ungauged Algerian urban catchments</b> <b>M. Boukhelifa</b> , L. Ouerdachi, H. Boutaghane
14:30	<b>Event-based characterisation of surface water runoff from an urban residential sewer separation scheme</b> <b>D. T. Morgan</b> , P. M. Johnston, L. W. Gill, P. G. Collins, K. Osei
14:40	<b>Integrated urban wastewater systems: Prediction of particle settling velocity distributions along the sewer - retention tank - primary clarifier system</b> <b>T. Maruéjols</b> , P. Lessard, P.A. Vanrolleghem
14:50	Coffee
<b>Session 12: Monitoring and new technologies</b>	
15:20	<b>Large-Scale Real-Time Hydraulic and Water Quality Monitoring of a Sewer Network in Europe's 10th Largest City</b> <b>P. J. Skipworth</b> , A. Ghinea
15:40	<b>The influence of local calibration on the quality of UV-VIS spectrometer measurements in urban stormwater monitoring</b> <b>N. Caradot</b> , H. Sonnenberg, M. Riechel, A. Matzinger, P. Rouault
16:00	<b>Comparison of DFT and PCA/DFT as forecasting tools of absorbances time series received by UV-Visible probes installed in urban sewer systems</b> <b>L. Plazas-Nossa</b> , Andrés Torres
16:20	<b>The performances of semi-distributed modelling in urban drainage: the trade-off between calibration on hydrological measurement and the inclusion of GIS data</b> C. Bonhomme, <b>G. Petrucci</b>
16:40	<b>Potential source contributions and risk assessment of particulate-associated polycyclic aromatic hydrocarbons (PAHs) in size-fractionated road-deposited sediments</b> <b>J. Zhang</b> , P. Hua, P. Krebs
17:00	<b>Multigas-sensor systems for sewer odour measurement – Evaluation of four different E-noses based on tests under realistic conditions</b> P. Rouault, T. Schwarzböck, <b>M. Riechel</b> , M. Frey, S. Giebel, F.-B. Frechen
17:20-17:30	<b>Closing Session</b>

	Wednesday	Thursday	Friday	
08:20	Registration			
8.30	Introduction (Adrian/Simon)	Registration	Registration	
8.40	Keynote - Thorkild Hvitved-Jacobsen	Session 5 Monitoring and new technologies	Session 9 Monitoring and new technologies	
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9.40	Session 1 Design and operational aspects	Session 6 Sewer system impacts	Session 10 Emerging issues and technologies	
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10.40	Session 2 In sewer processes	Lunch	Lunch	
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11.40	Lunch	Lunch	Lunch	
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12.40	Session 3a	Session 3b	Session 11a	Session 11b
13.00	Coffee	session 7a	session 7b	Session 7c
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14.00	Session 4 In sewer processes	Session 8 Design and operational aspects	Session 12 Monitoring and new technologies	
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15.00	coffee	coffee	coffee	
15.10	Closing			
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16.10	Bus transfer	Bus transfer		
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17.10	Kelham Island, Drinks reception	Conference dinner		
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