

## Conference Program

**Venue 12th January 2020:** Orange Crystal Hotel, No.1 Xuanyuan East Road, Harbin

**Venue 13<sup>th</sup> and 14<sup>th</sup> January:** State Key Laboratory of Urban Water Resource and Environment, Harbin Institute of Technology, 6<sup>th</sup> floor, No. 73, Huanghe Road, Nangang District, Harbin

<b>Sunday 12th January 2020</b>	
12:00-17:00	<b>Registration, Orange Crystal Hotel, No.1 Xuanyuan East Road, Harbin</b>
17:00-18:30	<b>Opening ceremony and reception, Orange Crystal hotel</b>
	Welcome address, Nanqi Ren, Vice president, Harbin Institute of Technology, China
	Address by the President of the European Water Association (EWA), Bjørn K Jensen, Denmark
	Address by the Executive Director of the International Water Association (IWA), Kala Vairavamoorthy, UK
18:30-20:30	Visit to the Harbin International Ice Sculpture festival
20:30	Dinner

<b>Monday 13th January 2020</b>	
<b>Venue: State Key Laboratory of Urban Water Resource and Environment, HiT</b>	
08:30-09:10	<b>Inaugural session: Chair: Johannes Lohaus and Yifan Li</b>
	Welcome address, Nanqi Ren, Harbin Institute of Technology, China
	Address from the EWA, Bjørn K Jensen, President, Denmark
	Address from the IWA, Kala Vairavamoorthy, Executive Director, UK/Netherlands
	Conference history and program, Harsha Ratnaweera, Co-Chair of the organising committee, Norway
	Practical issues, Liyan Liu, Co-Chair of the organising committee, China
09:10-10:10	<b>Opening keynotes</b>
	Water bodies in Europe: condition, trends and prospects, Johannes Lohaus, Germany
	Water supply challenges in cold climates, Joachim Fettig, Germany
	Wastewater management in cold climates, Harsha Ratnaweera, Norway
10:10-10:30	<b>Tea Break</b>
10:30-11:40	<b>Emerging micropollutants and microplastics: Chair: Vlad Tarabara and Xuejun Bi</b>
	Contaminants of emerging concern (CECs) in background and effluent waters from northern Europe and the arctic, <b>Roland Kallenborn</b> , Aasim M.M. Ali, Julie Strømberg, Norway
	Contaminants of emerging concern (CECs) in background and effluent waters from northern Europe and the arctic, <b>Yifan Li</b> , China
	Microplastic in wastewater treatment plants in a northeast city of China: distribution and characteristics, <b>Hongliang Jia</b> , Shuo Zhang, Weijun Guo, Yi-Fan Li
11:40-12:10	<b>Panel discussion-I: EU-China research collaboration, Moderator: Bjørn K Jensen, EWA</b>
12:10-13:20	<b>Lunch</b>
13:20-14:40	<b>Water supply: Chair: Joachim Fettig and Sheng Chang</b>
	Biofiltration for water treatment at cold temperatures: BAC Vs. BIEX, E. Mills, B. Barbeau, M. Mohseni, <b>Pierre Berube</b> , Canada
	Prediction of trihalomethanes formation potential in disinfection of drinking water in northern Europe, <b>Zakhar Maletskyi</b> , Evelina Koltsova, Harsha Ratnaweera, H. Stolyarenko, Norway/Ukraine
	Rapid characterisation of natural organic matter and precursors to disinfection by-products in cold climate water sources, <b>Taha Marhaba</b> , USA
	Integration of advanced physico-chemical processes (MPUV/PAA) for advanced oxidation process in cold climates, <b>Xiuwei Ao</b> , Wenjun Sun, Domenico Santoro, China/Canada

14:40-15:30	<b>Poster session (5 minutes presentations): Chair: Pierre Berube and Lihua Cheng</b>
	Phthalates in drinking water in cold climate: occurrence and implications for human exposure, Hai Ling Li, Yi Fan Li, <b>Li Yan Liu</b> , China
	Problems and countermeasures of utilisation of micro-polluted surface water resource in Tianjin Binhai new area (TBNA), Yanjing Zhu, Ran Li, Rui Wang, Xuqing Lu, <b>Gao Si</b> , China/Sweden
	Impact of chemical coagulant on phosphors removal and costs in advanced wastewater treatment of urban sewage treatment plant, <b>Liu Wei</b> , P Ming, Z Yiming, China
	An investigation of energy metabolism improvement in the anoxic-anaerobic-oxic process (reversed AAO): a new insight, Linlin Li, Gaoyang Xu, <b>Changqing Liu</b> , Feng Zhang, China
	Managing sewage treatment in the extreme cold: Nunavut, Cambridge bay, Northern Canada, <b>Ken Johnsen</b> , Canada
	Degradation of bisphenol a by ozonation in rotating packed bed, <b>Lei Wang</b> , Lei Shao, China
	Prototyping an image analysis sensor for coagulation process in wastewater treatment, <b>Nataliya Sivchenko</b> , Aleksander Hykkerud, Therese Torskenæs, Harsha Ratnaweera, Norway
	Na <sub>2</sub> S modified spent li ion battery anode waste as adsorbents for removing Pb(II) ion from the aqueous solutions, Yuchen Wang, X.Y. Han, S.Q. Gao, Zhibin Zhang, <b>Yanhao Zhang</b> , China
	Energy- and reagents-saving analytical systems for monitoring of water quality in cold climate, <b>Stanislawa Koronkiewicz</b> , Slawomir Kalinowski, Poland
15:30-16:00	<b>Tea Break</b>
16:00-17:30	<b>Decentralised waste management: Chair: Vital Gitis and Changqing Liu</b>
	Decentralized sanitary options for cold climate. <b>Petter D Jensen</b> , Norway
	Vermi-composting for treatment of human faeces from urine diverting dry toilet (UDDT) in cold climate, Bang Le-Trong, <b>Mooyoung Han</b> , South Korea
	Design consideration of urine reactor from UDDT at cold climate, Eunha Park, <b>Mooyoung Han</b> , South Korea
	Source-separation and resource recycling - for improved resource management and sustainable wastewater treatment in cold climate, <b>Melesse Morges</b> , Arve Heistad, Norway
18:30	<b>Dinner</b>

**Tuesday 14th January 2020**

08:30-10:10	<b>Industrial water and wastewater management: Chair: Roland Kallenborm and tbc</b>
	Produced water management in cold climates, <b>Torleiv Bilstad</b> , Evgeniya Protasova, Norway
	Oil spills under ice: kinetics of oil spreading as a function of ice cover characteristics, V. T. Marinelli, D. Thomas, A. W. Beattie, G. E. Gunn,, M. Ruddy,d, D. Bessette, R. B. Richardson, <b>Vlad Tarabara</b> , USA/Canada
	Challenges in chemical cleaning of ultrafiltration membranes at low temperatures, E. Arkhangelskya, A. Bazarbayevaa, A. Satayevaa, J. Kim, V. Inglezakis, <b>Vitaly Gitis</b> , Kazakhstan/Israel
	The effect of temperature on the biosorption of dyes from wastewater, <b>Lech Smoczynski</b> , Poland
	Study on immobilisation of heavy metals contaminated sediments by (Ca(H <sub>2</sub> PO <sub>4</sub> ) <sub>2</sub> ), CaCO <sub>3</sub> , and hydroxyapatite, DJ Yana, XH Shia, Yuchen Zhang, <b>Zhibin Zhang</b> , China
10:10-10:30	<b>Tea break</b>
10:30-11:30	<b>Managing emerging micropollutants: Chair: Taha Marahaba and Zhibin Zhang</b>
	Distribution of antibiotic resistance genes (ARGs) and antibiotic resistant bacteria (ARBs) In wastewater treatment plant, <b>Lihua Cheng</b> , Jing Hu, Teng Li, Xiaolin Zhou, Xuejun Bi, China

	A potential adsorbent ZIF-67 decorated with nanosheets for the removal of antibiotics, Cr (VI) ions and organic dyes, <b>Summaira Saghir</b> , Xiao Zhenggang Xiao, China
	Solvothermal synthesis of carbonaceous material for degradation of organic pollutants in wastewater, <b>Li Zhou</b> , S.B. Wang, H. Q. Sun, S.M. Liu, Australia
11:30-12:00	<b>Panel discussion-II: Digitalisation of the water industry</b> , Moderator: <b>Kala Vairavamoorthy</b> , IWA
12:00-13:15	<b>Lunch</b>
13:15-15:15	<b>Domestic wastewater treatment: Chair: Mooyoung Han and tbc</b>
	An innovative method for improving cold-resistant of activated sludge by composite ferric in the biomass, <b>Xuejun Bi</b> , Xiaodong Wang, Lihua Cheng, Changqing Liu, China
	Enhanced biological phosphorus removal (EBPR) in cold and diluted wastewater, and Blanca Gonzalez Silva, Kine Svendby, <b>Stein W Østerhus</b> , Norway
	Rapid formation of aerobic granular sludge for simultaneous removal of organics, nitrogen, and phosphorus at low temperature, <b>Yu Jiang</b> , Singapore
	Impact of temperature history on anammox process performance and ladderane lipid composition, <b>Vojtech Kouba</b> , K Hurkova, K Navratilova, A Benakova, D Vejmelkova, M Laurení, L van Niftrik, J Hajslova, MCM van Loosdrecht, D Weissbrodt, J Bartacek, Czech Republic/Netherlands
	THP advanced anaerobic digestion for compact and efficient biosolids management in cold climates, <b>Zuliang Liao</b> , K. Svensson, G. Sørensen, Y. Ge, Y. Zhang, D. Deng, C. Han, R. Zhang, L. Shi, Norway/China
	Looking into lipolytic potential of psychrophiles to develop anaerobic digestion in domestic wastewater treatment, <b>Reihaneh Bashiri</b> , Tom Curtis, Dana Ofiteru, UK
15:15-15:40	<b>Tea Break</b>
15:40-17:40	<b>Innovative tools and concepts for the water sector: Chair: Torleiv Bilstad and tbc</b>
	Applying holistic cost benefit analysis in the water sector: cold climates, <b>Dino Ratnaweera</b> , Norway
	Sustainable wastewater treatment for the Norwegian context - Use of LCA for selection of chemicals and comparison of processes, <b>Kamal Azrague</b> , Herman Helness, Gema Raspati and Willy Thelin Norway
	New methods of internal calibration of water quality monitoring systems in cold climate, <b>Slawomir Kalinowski</b> , Stanisława Koronkiewicz, Poland
	A stepwise machine learning method for managing uncertainty of wastewater treatment plants caused by snow melting in cold climate, <b>Xiaodong Wang</b> , Knut Kvaal, Harsha Ratnaweera, Benliang Yang, Changqin Liu, Xuejun Bi, China/Norway
	A conductivity based soft-sensor for real-time estimation of phosphate concentration in a multi-stage bio-P MBBR pilot plant, <b>Abhilash Nair</b> , Finn Haugen, Harsha Ratnaweera, Norway
	Dosage optimisation of polyaluminum chloride by the application of convolutional neural network to floc images taken in a jar-test, <b>Hiroshi Tamamura</b> , Eryanti Utami Putri, Takashi Kawakami, Akihiro Suzuki, Japan
17:40-18:00	<b>Closure: Chair: Harsha Ratnaweera</b>
	Johannes Lohaus, General Secretary, EWA
	Kala Vairavamoorthy/Tao Li, IWA
	Yifang Li, HiT, Conference co-chair
19:00	<b>Dinner</b>