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# 14<sup>TH</sup> DWF WATER RESEARCH CONFERENCE

## 30 JANUARY 2020

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DWF is delighted to invite you to the 14<sup>th</sup> annual water research conference with focus on the latest findings within water research and innovation and in the light of the focus on green transition in government policy and in the research funding agencies with key note presentations on the role of water in green/blue transition. The annual conference has a densely packed program and will have dedicated sessions on:

- Drinking water, material and technology
- Ground water, treatment management and new technologies
- Urban water
- Waste water and new technologies
- Dedicated Session: From Research to Practice, organised by Young Water Professionals
- Dedicated Session: Research development North/South, University of Copenhagen
- Dedicated Session: Water Smart Cities, Technical University of Denmark

**VENUE: University of Copenhagen, Thorvaldsensvej 40, 1871 Frederiksberg (see map)**

Please find the program for the day below and sign up on [www.danishwaterforum.dk](http://www.danishwaterforum.dk)

### AWARD SPONSORS



### Overall Time table:

09.00 – 09.30:	Registration: CPH University, Thorvaldsensvej 40, 1871 Frederiksberg
09.30 – 12.00:	Green transition is also blue – the role of water research and innovation in future activities to mitigate and adapt to climate change
12.00 – 12.45	Lunch
13.00 – 18.00	4 dedicated parallel sessions on .
18.00 – 18.30	Drinks, snacks and mingling! The Grundfos and NIRAS awards are presented and the conference closes.
18.45	Dinner (only at sign-up)

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### Members of the Scientific Committee

**Peter Engelund Holm**, PLEN, University of Copenhagen, **Bjørn K. Jensen**, GEUS; **Hans Jørgen Albrechtsen**, DTU Environment; **Esbén Auken**, Department of Geoscience, Aarhus University; **Jesper Goodley Dannisøe**, DHI; **Marina Bergen Jensen**, IGN, University of Copenhagen; **Torben Lund Skovhus**, VIA University College, **Ole Mark**, DHI; **Hans-Martin Friis Møller**, KALFOR; **Anders Refsgaard**, COWI.

## Overall program:

Time	Room 1	Room 2	Room 3
09.00	Registration		
09.30	Opening		
09.30	Theme: No green transition without a blue transition		
10.50	Coffee-break		
11.00	Plenum session: Blue transition		
12.00	Lunch break		
12.45	Session 1: Drinking water	Session 6: Groundwater	Session 11: Wastewater
14.00	Session 2: Drinking water	Session 7: Groundwater	Session 12: Wastewater
15.00	Coffee-break and posters		
15.30	Session 3: Drinking water	Session 8: Groundwater	Session 13: Wastewater
16.30	Session 4: Research; Water governance the Danish way	Session 9: Water Smart Cities	Session 14: From research to practice
17.30	Session 5: Research; Water governance the Danish way	Session 10: Water Smart Cities	Session 15: From research to practice
18.00	Drinks and rewards		
18.45			Dinner

## Thematic track

PLENUM	Theme: Green transition is also blue
09.30	Opening of the Conference, Hans-Martin Friis Møller, Chairman of DWF
09.40	The Blue transition/Lars Schrøder, Aarhus Vand
10.10	How is water perceived within the new Green transition call of the InnovationFund Denmark/ NN, IFD
10.30	How is water to be involved in the MUDP call on Green transition/NN, MUDP secretariat (tbd)
10.50	Coffee BREAK
11.20	Concrete example on how to integrate water and climate change mitigation in a future integrated water supply facility/Hans-Martin Friis Møller, KALFOR and Chairman of DWF
11.20	Political initiatives to maintain Danish political focus on climate change and water/NN , Danish Parliament (tbd)
11.40	Q&A
12.00	Lunch BREAK

## ROOM 1 (from lunch)

12.45	Session 1: Drinking water
14.00	Session 2: Drinking water
<b>15.00</b>	<b>Coffee-break and posters</b>
15.30	Session 3: Drinking water
16.30	Session 4: Research; Water governance the Danish way
17.30	Session 5: Research continued

## Session 1,2 and 3: Drinking water, treatment, technology

Title of presentation	Presenter
Groundwater treatment by co-oxidation of Fe(II), Mn(II) and As(III): Impact of oxidant identity on removal efficiencies and reaction products	Case M. van Genuchten, Geochem. Dept., GEUS*
The Innovative Biotechnology for Pesticide Removal at Waterworks	Sanin Musovic, Danish Technological Institute
Sustainable removal of methane gas from exhaust air of waterworks	Lisbeth D. Christensen, Danish Technological Institute
Softening of drinking water – Calcium Carbonate Precipitation Potential (CCPP) and Measured Calcium Carbonate Precipitation (MCCP)	Sevil V. Afshar*, DTU Environment
Backwash efficiency evaluated based on geophysical method	Majbritt D. Lund, VIA University College
Clean water and urban growth	Hanne Birch Madsen, Rambøll
Natural Toxins and Drinking Water Quality - An Emerging Area of Concern	Lars Holm Rasmussen, University College Copenhagen
Characterizing the development of biofilm in PE pipes through 1.5 years in the non-chlorinated Danish drinking water system	Ditte Andreasen Søbørg, VIA University College
Learnings from an applied research project: The role of beneficial biofilms during commissioning of new drinking water PE pipes in Aarhus, Denmark	Torben.L. Skovhus, VIA University College
Choosing between materials with different certification – a comparative study of certification schemes for materials in contact with drinking water	Anne H. Thomsen, DTU Environment
Concentrate and degrade perfluorooctanoic acid on an adsorptive photocatalyst	Zongsu Wei, WATEC, Aarhus University
A snapshot of organic micropollutants in Danish surface waters	Pedro N. Carvalho, Aarhus University, Envir. Sci
Leak detection using data from smart meters	Kristoffer. R. Andersen, Kamstrup A/S

## Session 4 and 5: Research and Water Governance. Final program pending

### Room 2 (from lunch)

12.45	Session 6: Groundwater
14.00	Session 7: Groundwater
<b>15.00</b>	<b>Coffe-break and posters</b>
15.30	Session 8: Groundwater
16.30	Session 9: Water Smart Cities
17.30	Session 10: Water Smart Cities

## Session 6,7 and 8: Groundwater, remediation, management

Title of presentation	Presenter
Integrated water management in the future climate change for robust risk assessment from contaminated point sources	Agnieszka. T. Bentzen, Region of Southern Denmark
Synergy between ozonation and activated carbon for chloroethenes contaminated groundwater treatment	Kamilla Marie Speht Kaarsholm, DTU Environment
Geophysical monitoring of the subsurface distribution of ISCO reagents in a groundwater remediation in Denmark	Thue Bording*, Aarhus University, Geoscience
Hydroeconomic optimization methods to address management issues of groundwater overdraft in the North China Plain	Grith Martinsen, GEUS
Removal of organic micropollutants – A comparison of different approaches – results from the CLEANWATER project.	Kaj Bester, Aarhus University, Envir. Sci
A hectare-scale decision tool for nitrate retention estimation by integration of geophysical, geological, geochemical and hydrological data	Rasmus Rumph Frederiksen, Aarhus University, Geoscience
Uncertainty analysis in groundwater modelling of N retention	Amir Safi, Aarhus University, Geo.Sci
Stochastic 3D redox and geological models for nitrate contamination assessment	Rasmus B Madsen, GEUS
Strategy for an improved implementation of riparian zones in the Danish nitrogen model	Saskia L. Noorduijn, GEUS
Can we measure the “unmeasurable”? Using drones and thermal imagery to study Danish wetlands	Joel Tirado-Conde, Uni. Copenhagen, Dept. Geosci. & Nat. Res.Man.
Searching for safe water sources using a towed transient electromagnetic (tTEM) system – examples from refugee camps and the surrounding host communities in western Tanzania	Denys Grombacher, Aarhus University, Geoscience.

## Session 9 and 10: Water Smart Cities: Final program pending

Title of presentation	Presenter
Water Smart Cities world view on model uses	
Real time modelling and monitoring	
Implementing MPC in Århus	
Using NH3 sensors in Copenhagen	
Objectives for strategic planning in Odense	

## Room 3 (from lunch)

12.45	Session 11: Wastewater
14.00	Session 12: Wastewater
<b>15.00</b>	<b>Coffee-break and posters</b>
15.30	Session 13: Wastewater
16.30	Session 14: From research to practice
17.30	Session 15: From research to practice

## Session 11, 12 and 13: Wastewater technologies and climate aspects

Title of presentation	Presenter
Triple-helix partnership as a tool for increased water efficiency in the food and beverage industry	Hanne Bengaard, Landbrug & Fødevarer
Model-based optimization of full-scale anaerobic digesters at the municipal wastewater treatment plant	Manuela Schliemann-Haug, Borja Valverde-Perez, DTU Environment.
Pilot-scale operation of an aquaporin-based forward osmosis process for polishing municipal wastewater effluents	Sylvie Braekevelt, Aquaporin
PFAS removal from percolate by super critical water oxidation (SCWO)	Yusuf Jama, Danish Technological Institute
Concentration dependent degradation of pharmaceuticals from wastewater in Moving Bed Biofilm Reactors (MBBR)	Sif Svendsen, Aarhus University, Envir. Sci
Metabolites of ethylene (EO) and propylene oxide (PO) containing compounds in wastewater and their biodegradation in MBBR reactors	Selina Tisler, Aarhus University, Envir. Sci
Efficient biological removal of pharmaceuticals from wastewater effluent using eXeno technology	Emma S. Rasmussen, Aarhus University, Dep. Bioscience
Evaluating added benefits and scalability of vertical, evaporation-based SUDS	Mark T. Randall, Uni. Copenhagen, Dept. Geosci. & Nat. Res. Man. (IGN)
Effects on removal rates of pharmaceuticals in biofilters by addition of BOD	Nadia Brogård Nord, Aarhus University, Envir. Sci
Can operational problems at full-scale activated sludge systems be solved with sludge transplantation?	Dorotthya S. Wágner, Aalborg University, Biotechnology
The New MiDAS Field Guide: Comprehensive Online Ecosystem-specific Database of Microorganisms in Wastewater Treatment Systems	Susan H. Hansen, Aalborg University, Biotechnology
Nitrification inhibition test of salty wastewater using salt-adapted nitrifying bacteria, an alternative test method to ISO method	Ravi Kumar Chhetri, DTU Environment

## Session 14 and 15; From research to practice (Workshop organized by IWA - Young Water Professionals)

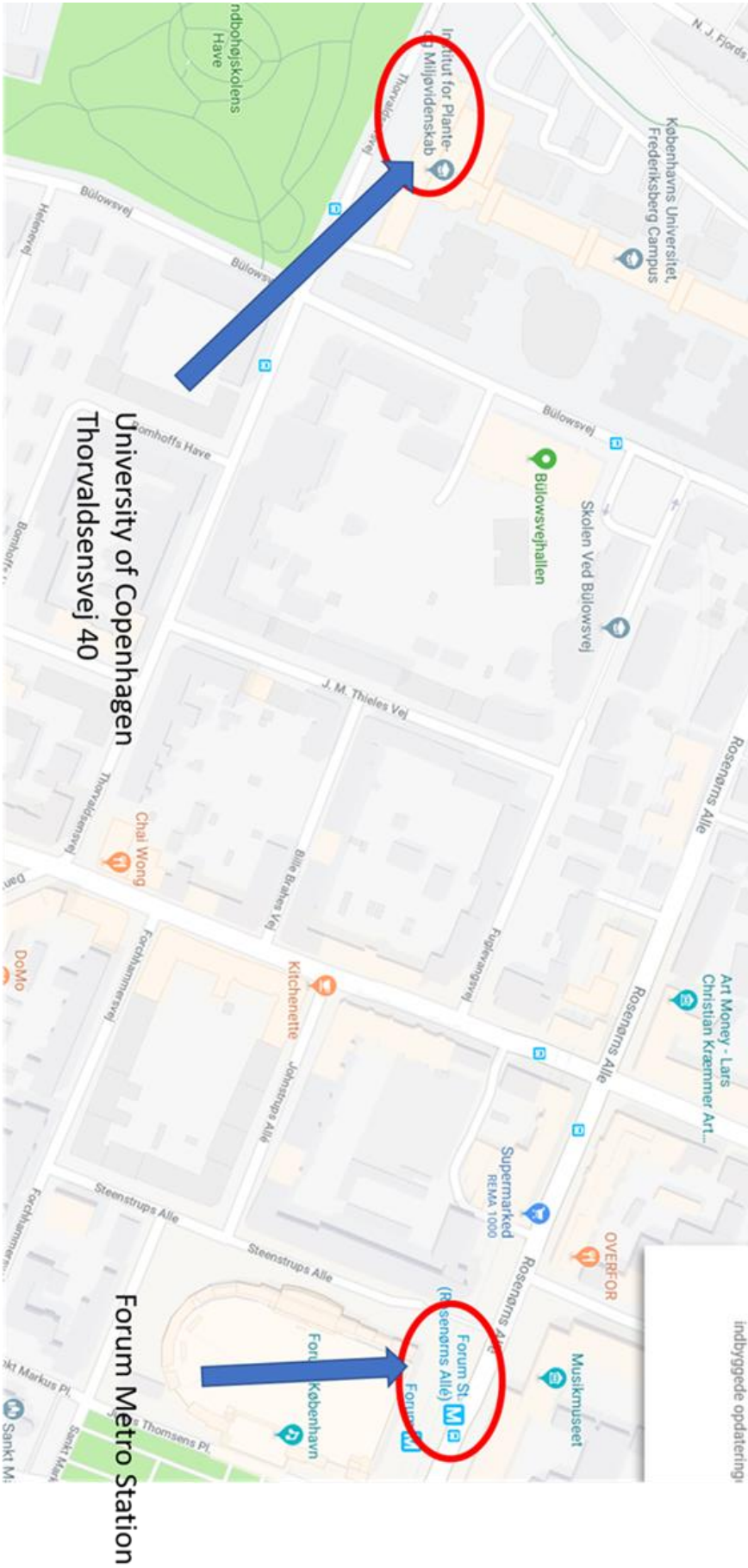
Title of presentation	Presenter
Introduction to the workshop, challenge	Ines Breda, Silhorko, YWPKD
Research and industry, the different perspectives	Torben Lund Skovhus, VIA University College Christian Schou, Grundfos
Panel debate	Hans-Jørgen Albrechtsen, DTU Pernille Ingildsen, Kalundborg Forsyning A/S Dorotthya Sarolta Wágnera, PostDoc AAU, YWPKD Thomas Illerman, Silhorko - Eurowater A/S
Plenary debate	Participants
Working groups including summarizing	Agnete Ansbæk, Fors, YWPKD
Take home messages	Torben Lund Skovhus, VIA University College Christian Schou, Grundfos



Title of poster	Presenter
Searching for safe water sources using a towed transient electromagnetic (tTEM) system – examples from refugee camps and the surrounding host communities in western Tanzania	Denys Grombacher, Hydrogeophysics Group, Department of Geoscience, Aarhus University
TAGS-P: An innovative and data-driven tool for assessing groundwater pesticide sensitivity	Julie K. Bielefeldt, COWI
VANDALF: Linking of Chemical and Toxicological Fingerprints: A new method to prioritize monitoring and regulation of pollutants in water	Peter Mortensen, Eurofins

**18.00 - 18.30:**

Drinks, snacks and mingling! The Grundfos and NIRAS awards are presented to two young water scientists. The conference closes.



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