The 19th IWA Leading Edge Conference on Water and Wastewater Technologies

Closing the water cycle through efficient and innovative technologies

the international water association

ESSEN
GERMANY

24-28 JUNE
2024

Organised by

the international water association

Co-organisers

Ruhrverband
WISSEN, WERTE, WASSER

EGLV
Emschergenossenschaft
Lippeverband

GELSENWASSER

www.iwa-let.org let@iwahq.org

INVITATION FROM THE CHAIRS OF THE PROGRAMME COMMITTEE

Jonathan Clement
Ramboll,
Singapore

Ana Soares
Cranfield University,
United Kingdom

The official theme chosen for the **19th Leading Edge Conference on Water and Wastewater Technologies** (LET 2024) is *Closing the water cycle through efficient and innovative technologies*. This is a dynamic subject and one for which LET is ideally-placed to provide leadership.

Amidst the global call for achieving Net-Zero objectives and addressing the challenges of climate change, the water industry assumes a pivotal role. Our approach must be bold and inventive, transcending conventional boundaries as we collaborate in interdisciplinary teams to forge solutions that are all-encompassing and future-ready. Every year, the Programme Committee strives to shed light on issues of global and regional prominence, while drawing from a rich pool of innovative technologies, novel developments, and pioneering applications spanning the entire industry.

Each session is meticulously crafted to foster a coherent and captivating discourse, featuring influential figures at the forefront of water technology leadership. On behalf of the Programme Committee, we therefore welcome your active engagement in this conference by contributing your paper showcasing ingenious and sustainable technological paradigms.

Our aspiration is to once again attract the riveting and pioneering contributions that have distinguished LET conferences as premier events over the past two decades. The triumph of this conference is intrinsically tied to your enthusiastic participation. Thus, we extend a warm invitation to join us in Essen in 2024, confident that our coming together will ignite a stimulating and invigorating exchange of the multitude of ideas and solutions you have cultivated. We eagerly anticipate welcoming you to Germany in June 2024!

INVITATION FROM THE CHAIR OF THE ORGANISING COMMITTEE

Norbert Jardin
Ruhrverband,
Germany

We are thrilled that the city of Essen, Germany, has been chosen as the prestigious host for the **19th Leading Edge Conference on Water and Wastewater Technologies** (LET 2024). Essen's reputation as a centre of technological advancement and sustainability makes it the perfect backdrop for the LET 2024 conference. This gathering presents a one-of-a-kind opportunity to engage in in-person networking, idea sharing, and staying abreast of the latest progress in drinking water and wastewater technologies.

Our Organizing Committee is eagerly looking forward to your enthusiastic involvement, as together we endeavor to create an exceptional and thought-provoking event. Your active participation will be instrumental in shaping the discourse and driving innovation within the field. We strongly urge you to contribute your valuable insights and submit your contributions to help make this conference a truly remarkable experience.

Join us in Essen, as we collectively explore the frontiers of water and wastewater technologies in 2024. Let's make this conference an unforgettable occasion that fosters meaningful exchanges and propels our understanding of these critical domains to new heights. We eagerly anticipate your presence and contributions to this landmark event.

CORE PROGRAMME COMMITTEE

Jonathan Clement
(Co-Chair) Ramboll Water, Singapore

Ana Soares
(Co-Chair) Cranfield University, United Kingdom

Mark van Loosdrecht
Delft University of Technology, The Netherlands

Jörg E. Drewes
Technical University of Munich, Germany

Norbert Jardin
Ruhrverband, Germany

KEY DATES

30 November 2023
Deadline for plenary lecture proposal

15 December 2023
Deadline for outline paper (max. 2 x A4 pages) submission

31 January 2024
Notification of acceptance for authors

31 January 2024
Advanced technical programme announced

1 March 2024
Workshop proposal deadline

SPONSORSHIP OPPORTUNITIES

We partner with some of the water sector's leading companies and organizations and work together for a better water future. Our sponsors and partners benefit from a unique opportunity to connect with thought leaders from within and outside the water sector and to network with hundreds of delegates.

If you are interested in sponsoring IWA LET 2024 or having a stand in the Exhibition, please check our sponsorship opportunities.

To book, please contact:
Kizito Masinde, Global Events & Awards Director
International Water Association
Email: kizito.masinde@iwahq.org

CONFERENCE LOCATION

The **19th Leading Edge Conference on Water and Wastewater Technologies** is set to take place in the vibrant German metropolis of Essen, situated in the heart of North-Rhine Westphalia, a federal state nestled in the western region of the country.

Our conference will unfold within the awe-inspiring confines of the historic Zollverein deep-coal mine complex, now a UNESCO world heritage site, offering a remarkable backdrop for our endeavours. Delve into the world of cutting-edge water and wastewater technologies in this unique setting that seamlessly merges past and future. To enrich your experience, we've also curated excursions to operational facilities that showcase these technologies in action, providing a tangible and enlightening conclusion to our event.

LET 2024 HOST COUNTRY PARTNERS

The main host country organiser of LET 2024 19th Leading Edge Conference on Water and Wastewater Technologies is the IWA German National Committee, with Ruhrverband, Emschergenossenschaft/Lippeverband and Gelsenwasser providing the administrative office on behalf of IWA GNC. The IWA GNC is supported by the following organisations:

- German Association for Water, Wastewater and Waste (DWA)
- German Technical and Scientific Association for Gas and Water (DVGW)
- Technical University of Munich (TUM)
- Research Institute for Water Management and Climate Future at RWTH Aachen University (FiW)
- IWW Water Centre
- The Centre for Water and Environmental Research (ZWU) at Duisburg-Essen University
- Institute of Environmental Engineering at RWTH Aachen University (ISA)

WE INVITE YOU TO SUBMIT A PAPER

Submitting a paper for LET 2024 gives you an opportunity to present your work to a global audience and the opportunity of publication in a leading international peer-reviewed journal.

The conference technical programme will consist of platform presentations, poster presentations, workshops and panel discussions.

All outline papers selected for presentation will be included in the online preprint – which will be accessible to all conference delegates.

Full papers from a selection of presentations will also be considered for publication in one of the IWA Publishing journals. Selected posters will be on display for the duration of the conference. Outline papers are now invited on the respective topics and should be submitted via our conference website.

Outline papers will be accepted for oral or poster presentations and shall be limited to a maximum of two A4 pages (including figures and tables). The outline paper has to contain adequate information to allow for a sound review. For guidelines on formatting outline papers and more information about LET 2024, please visit www.iwa-let.org

Further information regarding registration for LET 2024 and paper presentations, including a template for outline papers, is available at www.iwa-let.org

The submission deadline for outline papers is **15 December 2023**. Submissions will be peer-reviewed and authors will be notified of the decision on their paper following the final meeting of the Programme Committee by 31 January 2024.

PROCEDURE FOR SUBMISSION

The following sequence of actions is the only method for submitting material for an oral or poster presentation at LET 2024.

You are asked to submit an outline paper, whether you intend to give an oral or poster presentation. The maximum length of your outline paper is to be 2 pages (A4) of text, plus 2 pages (A4) of figures, tables and references.

Click **HERE** to see the outline paper template.
All submissions must include:

- A title that clearly expresses the subject of the paper
- All authors' names and affiliations
- Contact information (name, designation, email address, postal address, and phone number) of corresponding author
- Type of presentation (oral or poster presentation)
- Theme of your presentation
- Short abstract summary, which should not exceed more than 10 lines
- No more than two A4 pages of an outline paper that must contain adequate information to allow a sound review: an introduction, concise details of methods and results, and conclusions

To be accepted for the LET 2024 conference, submissions must report work that is novel, original, sound, well described, and be of interest to conference participants. Submissions must contain original data and meet international ethical standards.

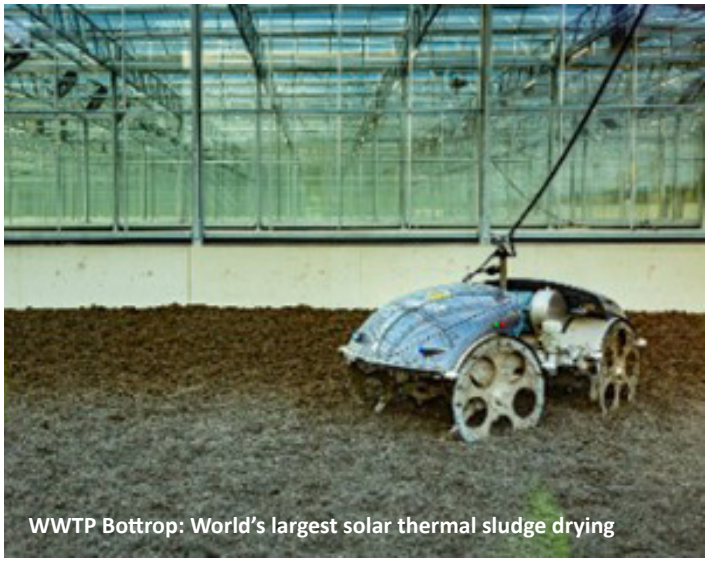
Selection criteria include high technical quality, relevance to the conference themes, and significant informative content. Outline papers that are deemed commercial in nature will not be accepted.

CONDITIONS OF PRESENTING

By submitting a paper you are consenting to be the corresponding author and the first point of contact for all communication regarding your submission. You will be responsible for communicating with any other authors of the submission.

Once the outline paper is selected for either platform presentation or poster presentation, at least one of the authors must register for the conference and present the paper at the conference.

All authors who register for the conference may have their article considered for publication in an IWA journal (Water Science and Technology, Water Research, etc.). Please note that acceptance of a paper for conference presentation does not guarantee subsequent acceptance for journal publication.



WWTP Bottrop: World's largest solar thermal sludge drying

LET 2024 THEMES

Joint Water and Wastewater Themes

Closing the water cycle

Closure of the water cycle is crucial to ensure sustainable water resource management by minimising waste, optimising resource utilisation, and addressing the growing challenges of water scarcity and pollution. This session explores innovative approaches in water and wastewater treatment, aiming to minimise waste and maximise resource recovery. Advanced technologies, policies, and collaborations that bridge the gap between water supply and wastewater treatment and promoting technologies for water reuse will be discussed.

Micro-contaminant monitoring and removal

Increased awareness of micro-contaminants and improved analytical techniques have led to stricter regulations and increased public awareness that will drive better removals of micro-contaminants. Removal of these trace compounds can be demanding, and innovations are being developed and implemented to make advanced processes more effective and sustainable. This session will explore these innovations and the implementation aspects of micro-contaminant removal and will cover both water and wastewater.

Water Themes

Developments in Digitalization

Enabling more direct and real time data, digitalization can greatly enhance treatment performance with respect to energy and efficiency. There are recent advancements in sensor technology that can give critical feedback to improve system operations and optimisation. This session will show recent advancements and how they are applied in real systems.

Membranes, hybrid systems and new materials

New materials are continuously being introduced into membranes to increase removal of contaminants, increase flux and decrease energy demand. A major area is the development of catalytical membranes that may be able to degrade micro-contaminants on membranes surfaces. Other developments include hybrid or integrated systems where the membrane works with a complementary treatment to produce enhanced results.

Advancements in Desalination

Higher energy costs, climate change and population growth are driving research and innovations on improving the reliability and performance of desalination. New technologies and integrated systems are developed to reduce the high energy demand of desalination while maintaining low footprint. This session will cover methods to reduce energy demand and increase reliability of desalination.

Wastewater Themes

Resource Recovery and Sludge Treatment

Wastewater treatment is moving towards net-zero processing and integration in a more circular economy. Recovery of resources (nutrients, chemicals, energy etc.) is getting implemented in new treatment plants. This session will show developments in the field and highlight the integration of resource recovery of chemicals and nutrients within wastewater treatment.

Carbon and energy neutrality and greenhouse gas emissions

Wastewater treatment is moving towards climate neutrality. This requires limiting emission of greenhouse gases (CH_4, N_2O and CO_2) while at the same time energy management (minimisation and recovery) has to be improved. This session will discuss the latest developments and innovations.

Innovative processes

Wastewater treatment processes keep being innovated. New technologies (such as MABR, Granular Sludge, MBR, etc.) will be discussed on their technical merits and practical implementation.