

The 21st IWA Leading Edge Conference on Water and Wastewater Technologies

Sparking the Water Future with Technology



Organised by



Co-organisers



www.iwa-let.org

let@iwahq.org

INVITATION FROM THE CHAIRS OF THE PROGRAMME COMMITTEE



Jörg E. Drewes
Technical University
of Munich, Germany



Ana Soares
Cranfield University,
United Kingdom

The theme of the **21st Leading Edge Conference on Water and Wastewater Technologies (LET 2027)** is **“Sparking the Water Future with Technology”**. Water infrastructure must respond to increasing uncertainty, climate change, Net-Zero ambitions, growing water reuse needs and emerging contaminants. Meeting these challenges requires bold, practical innovation and stronger collaboration across disciplines.

Each year, the Programme Committee focuses on issues of global and regional importance, showcasing emerging technologies, novel developments and pioneering applications across the water sector. Sessions are designed to bring together leading experts and create focused discussion around the solutions shaping the future of water and wastewater treatment.

We welcome contributions that present sustainable technological advances and demonstrate their potential for real-world application. Over the past two decades, LET has built its reputation by bringing forward pioneering work and creating a forum where new ideas, evidence and experience can be exchanged across the sector.

What makes LET unique is its emphasis on innovation at meaningful scale. The conference examines how technologies progress from research and pilot studies towards full-scale application, including the successes, challenges and lessons associated with scale-up and implementation. A central part of this is collaboration between academia and industry, bringing together researchers, technology developers, utilities, consultants and practitioners to show how partnerships can accelerate the translation of new technologies into practice.

The success of the conference depends on active participation from the water community. We warmly invite you to join us in Ghent in 2027 and contribute to a stimulating exchange of ideas, technologies and experiences. We look forward to welcoming you to Belgium in May 2027!

INVITATION FROM THE CHAIRS OF THE ORGANISING COMMITTEE



Birgit De Bock
Aquafin Nv,
Belgium



Willy Verstraete
Prof. Emeritus
Ghent University, Belgium

We are delighted that Aquafin, Ghent University and the Capture platform will host the prestigious 21st Leading Edge Conference on Water and Wastewater Technologies (LET 2027) in Ghent, Belgium. On behalf of the local Organising Committee, we thank IWA for this honour and extend a warm welcome to all participants joining us from around the world in the historic city of Ghent.

LET provides a unique platform to network, share ideas, and stay at the forefront of drinking water and wastewater treatment innovation. It is therefore fitting that LET 2027 is coming to Ghent, a place surrounded by water which stood among Europe's most independent cities in the Middle Ages, shaped by a strong will to question authority and defend its autonomy. That rebellious spirit still defines the city today.

Ghent is a place where bold ideas thrive, where creativity and science intersect, and where challenging the status quo is not just accepted — it is encouraged. As the credo of Ghent University says: **“Dare to Think”!** Our university proudly counts a Nobel Prize winner among its alumni, and continues to foster a culture of free thinking at its campuses in Belgium and South Korea. **Because real innovation starts where conventions are challenged.**

Co-host Aquafin aims to be a frontrunner in applying new technology, and is in a unique position to do so as a large wastewater utility in Flanders, operating more than 300 wastewater treatment plants.

LET 2027 will bring the water industry and applied academic researchers together. This focus on practical implications is reflected in our local organising team with Dr. Wim Audenaert and Prof. Dr. Bart De Gussemé as co-chairs. And we are privileged to have our inspiring mentor and leading edge example to many, Em. Prof. Dr. Willy Verstraete, on board.

We look forward to welcoming you and being part of **an engaging and stimulating conference, breaking new ground for water management and technology**. IWA LET 2027 truly will **“Spark the Water Future with Technology”!**

STEERING COMMITTEE

Jonathan Clement
JAC Water, Thailand

Ana Soares
Cranfield University, United Kingdom

Jörg E. Drewes
Technical University of Munich, Germany

Mark van Loosdrecht
Delft University of Technology, The Netherlands

KEY DATES

20 October 2026
Deadline for outline paper (max. 2 x A4 pages) submission

15 January 2027
Notification of acceptance for authors

12 February 2027
Advanced technical programme announced

2 March 2027
Workshop proposal deadline

CONFERENCE LOCATION



The **21st Leading Edge Conference on Water and Wastewater Technologies** (LET 2027) will take place in **De Bijloke – A Unique Conference Venue**. Located within walking distance of Ghent's historic centre, De Bijloke is a landmark conference and cultural venue set on a beautifully restored historic site. Blending centuries-old architecture with modern facilities, De Bijloke provides an inspiring environment for scientific exchange, collaboration, and innovation. Its unique character, flexible meeting spaces, and exceptional acoustics create a memorable experience for conference delegates while showcasing the distinctive charm of Ghent.

Ghent – A City of Innovation and Heritage

Ghent is one of Europe's most vibrant and welcoming conference destinations, combining a rich medieval heritage with a dynamic ecosystem of research, technology, and sustainability. As proof of this, Ghent broke into the global top 10 of leading technology cities, hosting the tenth most innovative tech companies per capita according to Dealroom's worldwide Density Leaders ranking. Home to a leading university, innovative companies, and a thriving cultural scene, Ghent offers an inspiring setting where tradition and forward-looking ideas meet. Its compact city centre, excellent accessibility, and renowned hospitality make it an ideal location for international conferences and networking.

SPONSORSHIP OPPORTUNITIES

We partner with some of the water sector's leading companies and organisations 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 2027, please check our sponsorship opportunities.

For Sponsorship Enquires, please contact:

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WE INVITE YOU TO SUBMIT A PAPER

Submitting a paper for LET 2027 gives you an opportunity to present your work to a global audience and to publish 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 on the following LET 2027 themes (page 5) are now invited 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 2027, please visit www.iwa-let.org.

Further information regarding registration for LET 2027 and paper presentations, including a template for outline papers, is available at www.iwa-let.org.

The submission deadline for outline papers is **20 October 2026**. Submissions will be peer-reviewed and authors will be notified of the decision on their paper by 15 January 2027, following the final meeting of the Programme Committee.

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 (International Water Proceedings, Water Research, etc.). Please note that the acceptance of a paper for conference presentation does not guarantee subsequent acceptance for journal publication.

PROCEDURE FOR SUBMISSION

The following sequence of actions is the only method for submitting material for an oral or poster presentation at LET 2027.

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 access the submittal portal. 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 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 2027 conference, submissions must report work that is novel, original, sound, well described, and 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.



Flanders first advanced wastewater treatment plant for micropollutant removal from urban wastewater in Aartselaar.

LET 2027 THEMES



Joint Drinking Water and Wastewater Themes

Digitalisation for process-automation

Access to direct and real-time data, digitalisation, automation and AI 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 feature such advancements and how they are applied in real systems.

Advances in applications and development of ceramic membranes - Efficiency and hybridisation

Ceramic membrane applications globally are exhibiting increasing growth across drinking water, water reuse and desalination. Operating conditions of ceramic membranes for these applications can vary widely while the pros and cons of operation and hybridisation are poorly understood. This session will cover the wide range of emerging applications and membrane materials.



Wastewater Themes

Advanced treatment in wastewater treatment plants

Advanced treatment to remove micropollutants is now moving from specialist application to a major implementation challenge for wastewater utilities. The recast Urban Wastewater Treatment Directive is accelerating adoption in Europe, and similar regulations are being implemented globally. Concerns over pharmaceuticals, pesticides, household and industrial chemicals, and antibiotic resistance are increasing demand for robust treatment barriers. This session focuses on innovations and technologies for micropollutant management and removal by advanced treatment, with emphasis on implementation and high-impact case studies.

Greenhouse gas emissions in wastewater treatment plants

Greenhouse gas emissions from wastewater treatment plants are now a leading-edge technology challenge because N_2O , CH_4 and direct CO_2 emissions are dynamic, site-specific and strongly shaped by process disturbances, microbial pathways and real-time operating conditions. The impacts of carbon taxation on decision making are uncertain and challenging. This session focuses on next-generation technologies that move beyond measurement campaigns towards predictive emissions, mitigation and abatement. Topics include all emissions process control, microbial and pathway-level diagnostics, intensified nitrogen removal with low N_2O risk, emerging N_2O abatement technologies, dissolved methane capture and conversion, and technologies that can verify emissions reduction at full-scale while maintaining treatment performance.

Resource recovery

Resource recovery from wastewater is strategically important as utilities respond to nutrient security, fertiliser price volatility, water scarcity, energy neutrality and circular manufacturing. The challenge is no longer only to demonstrate recovery, but to implement technologies at scale. This session will focus on recovery from wastewater, process streams and brines, including nutrients, cellulose, biopolymers, volatile fatty acids, organics, water, heat, biogas upgrading and syngas production, with evidence from pilot, demonstration and full scale implementation in wastewater treatment plants.

Advanced solids management

Sludge management is a major technology priority as conventional routes face increasing pressure from PFAS, microplastics, antibiotic-resistance genes, land-application restrictions, energy costs and public acceptance. This session will focus on technologies for sludge treatment, stabilisation and volume reduction, including advanced digestion, hydrolysis, dewatering, drying, pyrolysis, gasification, hydrothermal processes, supercritical water oxidation and contaminant-destruction approaches. Contributions should emphasise process performance, contaminant fate, energy balance, emissions and practical evidence from pilot, demonstration and full-scale implementation.



Drinking Water Themes

Augmenting drinking water by potable reuse

Augmenting drinking water supplies by water recycling is a growing practice. Recent developments towards potable reuse favour non-membrane-based hybrid solutions for inland communities in comparison to high-pressure membranes in coastal settings. This session explores innovative approaches in providing cost- and resource-efficient, practically operable treatment promoting technologies for potable water.

Nature-based technologies

Recent advances in biotechnology, in particular use of genomics, and in-situ sensors as well as an increasing pressure to reduce energy requirements and carbon footprint of water treatment and reuse technologies have resulted in new developments using nature-based technologies. This session will feature the latest developments of nature-based technologies to target trace organic chemicals and pathogens for treating impaired water resources, (grey)water reuse and RO brine management in water recycling projects. The integration, reliability and energy demand of these technologies or hybrid solutions will also be of interest.