

on Rethinking Treatment with Asset Management

**22-24**SEPTEMBER**2021** <u>PORTO</u> · PORTUGAL









#### INVITATION



We are pleased to invite you to participate in the IWA International Conference on RETHINKING TREATMENT WITH ASSET MANAGEMENT. The conference will be held in parallel with the 5th International Conference on Water Economics, Statistics and Finance. The focus of this edition is mainly on the Asset Management for effective water treatment and reuse. The event is jointly organized by the IWA Specialist Group on Strategic Asset Management and by the IWA Specialist Group on Statistics and Economics and will take place in the attractive city of Porto, where old-fashion houses merge with modern look spots and life-style, leaning between the shorelines of Douro's River mouth and the sea, in the north of Portugal.

The Conference's theme emphasises the need to rethink first, when analysing our water systems and related treatment facilities, through integrated, continuous processes. These have to support decision making to select the best options on how to adapt the treatment systems to meet evolving demands and what investments to carry on continuously. Also, and integrated approach should consider the whole water or water systems, integrating water quality analysis both in the networks and the receiving waters, and not only in treatment facilities. The Conference aims to discuss the major challenges of water professionals, water utilities - either public or private, regulators, official bodies and governments around the world. Facing increasing problems, from climate changes to emerging pollutants, water reuse, untreated wastewater discharges and resource recovery, utilities must pursue sustainability, along with long-term planning, human resources empowerment, mastering performance indicators, risk management and decision making tools. Not only they have to persuade stakeholders of the present expenditures needed, but also they must enable the resources for the unavoidable long-term costs to rehabilitate and renew systems to assure service levels.

While in some places water infrastructures are degrading and public and private utilities are facing significant replacement and rehabilitation costs, due to a lack of asset management practices, the way professionals used to assess and design water facilities is changing. This often

results from new approaches triggered by external stress on water systems (e.g. increasing energy costs, public health concerns, climate changes, etc.), but also as a consequence of imposed limitations to operation and rehabilitation expenditures. Optimising infrastructures in order to meet capital availability is surely a task for water professionals to embrace as part of their job. But, the risk is there that society overvalues this as a required effort only to get water services at adequate fair prices. Accordingly, the sector should evaluate whether its activity is being correctly communicated to all stakeholders.

Also, as highlighted by IWA, "Digital water is already here"! From big data solutions to advanced management of the distribution networks, to digital customer engagement programs, lots of utilities have begun the digital transformation journey. This transformation is not always easy - aging infrastructure, inadequate investment, changing climate and demographics - and so "digital water" is now seen not as an 'option' but as an 'imperative'.

During the conference, water policy-makers and regulators, utility managers, planners and operators, scientists and academics, investing institutions, professionals, engineering developers and contractors. consultants and other water professionals are invited to debate the improvement of water facilities' performance and sustainability, in a global context of increasing risks and complexity.

# **CONFERENCE VENUE**



Congress Centre ISEP Rua Dr. António Bernardino de Almeida, 431 4200-072 Porto

## **ORGANISING COMMITTEE**

Jaime Gabriel Silva (Chair) · Águas Douro e Paiva / Engineering School, Polytechnic Institute of Porto (ISEP), Portugal

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Masao Shibuya · IWA SG Statistics & Economics / Japanese Water Works Ass. (JWWA), Japan

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#### **SCIENTIFIC AND PROGRAM COMMITTEE**



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Jaime Gabriel Silva (Co-chair) · Águas do Douro e Paiva / Engineering School, Polytechnic Inst. Porto (ISEP), Portugal

Celso de Azevedo · AssetsMan & Assetskill / ISO TC 251. France

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Franz Tscheikner-Gratl · Norwegian University of Science and Technology (NTNU), Trondheim, Norway

Catarina Tuna · Águas do Porto / Portuguese Association for Water Drainage and Supply (APDA), Portugal

João Vilaça · SimDouro, Gaia, Portugal

Caty Werey · IRSTEA - Engees GESTE, Strasbourg, France



#### **SUBJECT AND TOPICS**

Water policy-makers, water users of all sectors, scientists and academics, utilities' managers, consultants and other professionals from all over the world, as well as young water professionals, are invited to present state-of-the-art communications related to rethinking treatment with asset management for improved performance, long-term planning of investments towards evolving demands and profiting from digital transformation.

Main target subjects and topics are:

#### **MAIN SUBJECT**

Asset Management for effective water treatment and reuse

#### **TOPICS**

- · Analyzing water / wastewater systems to assess sustainability and service levels compliance
- · Water / wastewater system analysis for decision making on renewal investments
- · Adapting water / wastewater treatment to face evolving demands during system life-cycle
- · Asset management approaches oriented to climate change impacts on water infrastructures
- · Asset management approaches oriented to emerging pollutants' impacts
- · Risk management as a driver for water / wastewater treatment renewal strategies
- · Energy efficiency as a driver for improving water / wastewater treatment plants and systems
- · Water reuse as a driver for improving wastewater treatment
- · Nutrients' recovery as a driver for improving wastewater treatment
- · Rethinking water treatment towards a circular economy
- · Best practices in investment prioritisation in water / wastewater treatment systems
- · Life cycle cost assessment: data and methodologies
- · Public policies and regulation on water / wastewater treatment as drivers for systems' sustainability
- · Solutions for sustainable water / wastewater systems in developing regions
- · Information systems and solutions to support long-term planning in treatment systems
- · Asset Management within the "Digital water" transformation
- $\cdot$  The Internet of Things (IoT) beyond asset management approaches

## PAPER PUBLICATION

The approved oral and poster presentations can be downloaded via the Conference website, exclusively for registered participants. Publication in this website will require at least one registered author for the Conference. Based on papers' merit, the conference Scientific and Program Committee will recommend papers to be submitted to peer-reviewed IWA Journals.

#### **PROCEDURE FOR SUBMISSION**



Authors should submit online an extended abstract in a standard format. For guidelines on formatting and to find out other information about the conference, visit www.isep.ipp.pt/IWA\_Porto2021.

On the basis of the proposals submitted, a review will be undertaken to select papers for presentation (oral or poster). Submissions should demonstrate special contribution to the advance in knowledge regarding the conference topics.

At least one author for each selected paper must register and attend the conference to present the paper. Authors must meet their own expenses to attend the conference.

### STRUCTURE OF THE SESSIONS

The Joint Conference will be organised in thematic sessions, combining invited speakers and open platform presentations, with some plenary sessions common to both IWA Specialist Groups Conferences and with parallel sessions covering the own topics' list of each IWA Specialist Group. Invited speakers will deliver state-of-the-art presentations on key topics of the Conference.

### **LANGUAGE**

The working language of the conference is English.

# **■ TECHNICAL EXHIBITION**

A Technical Exhibition will be offered as a complement of the oral and poster presentation sessions. Service providers and organizations of the water sector are invited to participate. Information on this Technical Exhibition will be delivered on the Conference website.

# **■ DEADLINES TO REMEMBER**



Extended Abstract's submission: 15 May 2021

Authors' notification: 30 May 2021 Early bird registration: 15 July 2021 Final submission: 15 July 2021

# CONTACTS

For more information about the Conference, visit: www.isep.ipp.pt/iwa\_Porto2021 or send a message to: IWA Porto2021@isep.ipp.pt

# SUPPORTING ORGANIZATIONS



















