

What is W.A.T.E.R. 2022?

W.A.T.E.R.: Workshop on Advanced measurement Techniques and Experimental Research is a Summer School started in 2016 by the Vrije Universiteit Brussel (www.vub.be) and the IAHR Experimental Methods and Instrumentation Committee (EMI) (www.iahr.org). The 6th edition will be held in the Instituto Superior Técnico - Universidade de Lisboa from July 18 to July 22, 2022. This Summer School is focused on experimental methods applied in different hydraulics fields. It combines theoretical sessions and hands-on measurement exercises in the laboratory. It is aimed at PhD and Master students as well as practitioners who are willing to get training in advanced hydraulic measurement techniques.

Topics covered

1. Hydraulic measurement fundamentals
2. Image analysis methods: particle image and particle tracking velocimetry (PIV and PTV)
3. Acoustic Doppler measurement fundamentals
4. Measurement of sediment concentration and fluxes
5. Field measurements
6. Data processing and data visualization

ECTS Credits

Course certificate will be awarded by VUB with 3 ECTS

Confirmed Lecturers

Ana Margarida Ricardo (CERIS/ULisboa, Portugal)
Elsa Carvalho (FEUP, Portugal)
Margaret Chen (VUB, Belgium)
Massimo Guerrero (UniBo, Italy)
Rui Aleixo (CERIS/ULisboa, Portugal)
Rui Ferreira (IST, Portugal)

Venue

Hydraulics Laboratory of Instituto Superior Técnico (IST)

Located at Civil Engineering Department of IST, Avenida Rovisco Pais, 1, Lisbon, the Hydraulics Laboratory is equipped with state-of-the-art equipment of Laser Doppler Velocimetry, Particle Image Velocimetry, and others.

Lisbon

Lisbon is the capital of Portugal and one of the oldest cities in Europe with a rich History and heritage.



How to arrive

Lisboa's Humberto Delgado International Airport is served by several airlines connecting Lisbon to most of European cities and capitals. The Metro (red line) connects the airport to the Instituto Superior Técnico.

Instituto Superior is well located in Lisbon and served by metro and several bus lines.

More information can be found in the W.A.T.E.R. Summer School website:

watersummerschool.wordpress.com

For more information

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CERIS/IST-ID

Workshop on Advanced measurement Techniques and Experimental Research

W.A.T.E.R. 2022

*A hands-on experimental
research in Hydraulics*

6th Edition

18th – 22nd July 2022

Lisboa, Portugal

Organized by

**Instituto Superior Técnico
Universidade de Lisboa**

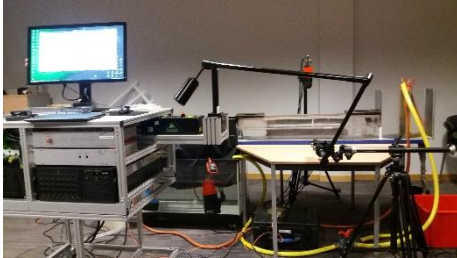
FUNDEC

Vrije Universiteit Brussel

**IAHR – Experimental Methods
and Instrumentation Committee**



A hands-on experimental approach

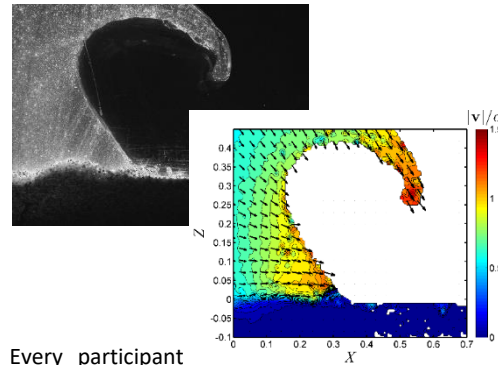


The W.A.T.E.R. Summer School is aimed to provide training of different measurement techniques applied in hydraulics considering both laboratory and field environments. To achieve this goal a training program consisting of both technique fundamentals and their applications is presented. The participants will have the opportunity to perform real-time measurements of different physical variables (e.g. turbulence, velocity profiles, bottom topography, sediment flux, etc.) using state of the art techniques including PIV, PTV and UVP. The W.A.T.E.R. Summer School is also a meeting point of young researchers to foster the exchange and cooperation between different institutions, and at the same time to provide the participants with an international research environment.

Laboratory measurements



Laboratory measurements will include the application of imaging based techniques such as PIV and PTV, and acoustical techniques such as UVP.



Every participant perform experiments in different experimental setups, to acquire and process data. Problem-solving orientated sessions are organized for the participants addressing the crucial issues regarding different types of measurements.

A field trip will be organized where the participants will have the opportunity to carry measurements in a real case scenario.



A Masterclass session is also included whereby each participant will have the opportunity to present and discuss their research with peers and lecturers to share knowledge, experience, and insights.

How to apply

Applicants should send a 1 page CV and a motivation letter (250 words) to ruiealeixo@tecnico.ulisboa.pt manifesting their interest in participating in the W.A.T.E.R. Summer School **before May 15th 2022**.

To maximize each participant hands-on opportunity the maximum number of attendees is limited to 16. The registration will be closed when the maximum number of attendees is reached.

Key dates

Manifestation of interest: May 15th, 2022

Communication of acceptance: May 18th, 2022

Registration payment deadline: June 20th, 2022

Fees

The W.A.T.E.R. Summer School fee is 600 euros (VAT to be added according to the law).

Fees include:

Coffee-breaks, Summer School dinner, course materials, access to laboratory, field and social programs.

