Venue: Zurich, Switzerland

Zurich by the water combines urban living with nature. Zurich offers countless events, many museums and a diverse gastronomic scene. The city is situated at the northern tip of Lake Zurich and on the Limmat and Sihl rivers. Whether for a coffee or beer at a waterfront restaurant or a cruise on Lake Zurich with views of the Alps: the city is virtually unrivalled when it comes to combining cosmopolitan flair, nature and indulgence. Zurich combines the advantages of a green and modern city at the foot of the Alps with excellent infrastructure and a strong network of business, education and ambitious start-ups. The city is a centre of research, development, business formation and innovation, not to mention a great place to live.

The Symposium will be held on the modern ETH campus Hönggerberg (https://ethz.ch/en/campus/access/hoenggerberg.html), 15 minutes and 30 minutes away from the city center and Zurich Airport, respectively. Free Wi-Fi is available throughout the campus.

Contact information

10th International Symposium on Hydraulic Structures
ETH Zurich, Laboratory of Hydraulics, Hydrology & Glaciology
Hönggerbergring 26, 8093 Zurich, Switzerland
email: ishs2024@vaw.baug.ethz.ch
www.ishs2024.ethz.ch

Tel: +41 44 632 40 91 (Mrs. Pia Steinbak)

Committees

Local Organising Committee

Albayrak, Ismail
Boes, Robert
Lais, Adriano
Steinbak, Pia
Vetsch, David
Weitbrecht, Volker

IAHR Hydraulic Structures Committee – Leadership Team

Ahmad, Zulfequar (Co-opted)
Bombardelli, Fabian (Member)
Crookston, Brian (Chair)
Erpicum, Sébastien (Past Chair)
Felder, Stefan (Vice-Chair)
Heller, Valentin (Member)
Mulligan, Sean (Member)
Oertel Mario, (Member)
Pummer, Elena (Co-opted)
Valero, Daniel (Member)

International Scientific Committee

Felder, Stefan (Chair)
Crookston, Brian (Vice-Chair)
Heller, Valentin (Vice-Chair)
Aberle, Jochen
Ahmad, Zulfequar
Aufleger, Markus
Bombardelli, Fabian
Bung, Daniel
Chanson, Hubert
Cokgor, Sevket
David, Laurent
Dewals, Benjamin J.
Erpicum, Sébastien
Evers, Frederic
Habersack, Helmut
Haun, Stefan
Kramer, Matthias
Kumar, Arun
Matos, Jorge
Meireles, Ines
Moran, Rafael
Münch-Alligné, Cécile
Mulliggan, Sean
Oertel, Mario
Oliveto, Giuseppe
Pagliara, Stefano
Papanicolaou, Thanos
Pfister, Michael
Pinheiro, António
Pummer, Elena
Rüther, Nils
Schneider, Josef
Sigtryggsdottir, Fjola Gudrun
Singh, Umesh
Stamm, Jürgen
Sumi, Tetsuya
Toro Labbe, Juan Pablo
Uijttewaal, Wim
Valero, Daniel
Wahl, Tony
Yang, James

10th IAHR

International Symposium on Hydraulic Structures

17-19 June, 2024
Zurich, Switzerland

9th IJREWHS,
20 June, 2024

www.ishs2024.ethz.ch

ISHS2024
10th International Symposium on Hydraulic Structures ETH Zurich, Switzerland

IAHR AIRH

ETH zürich

Invitation

On behalf of the Hydraulic Structures Committee of the International Association for Hydro-Environment Engineering and Research (IAHR), the Local Organizing Committee is delighted to invite you to participate in the 10th International Symposium on Hydraulic Structures which will take place from 17-19 June 2024 in Zurich, Switzerland.

Hydraulic structures are and will be a vital part of the infrastructure for human beings as they provide safe irrigation and water supply, protection against natural hazards, renewable energy generation, and many other highly needed services. Given the current global challenges including water scarcity, more frequent floods, need for clean and affordable energy and environmental issues related to watercourses as biodiversity hotspots, hydraulic structures will remain very relevant in the future. This symposium aims to bring together experts working in the specialized design of hydraulic structures from fundamental and applied research and practice. It will provide a forum for presentation and discussion of recent advances in research and development, knowledge gain and dissemination, as well as future needs.

The 10th ISHS will be held at ETH Zurich, Switzerland, organized by the Laboratory of Hydraulics, Hydrology and Glaciology (VAW). VAW was established in 1930 and has been conducting pioneering research on hydraulic structures, eco-hydraulics, fluvial systems, and river morphodynamics since then. Switzerland has a rich experience in hydraulic engineering with two well-known hydraulic laboratories in Lausanne and Zurich, many international consultancy companies, and a large fleet of low- to high-head dams and hydropower plants, weirs, bypass tunnels, fishways and other hydraulic structures. The symposium offers a visit of the VAW laboratory and a one-day excursion to Spitallamm dam near Grimsel Pass in the heart of the Swiss Alps and to a major flood protection construction site near Zurich.

Prof. Dr. Robert Boes (Chairman, LOC)

The 10th International Symposium on Hydraulic Structures

The upcoming event is the tenth in a successful series of International Symposia on Hydraulic Structures organized by the Hydraulic Structures Committee of IAHR, in cooperation with other Committees, Associations or Institutions. The event was held in Tehran, Iran, in 2004; Ciudad Guayana, Venezuela, in 2006; Nanjing, China, in 2008; Porto, Portugal, in 2012; Brisbane, Australia, in 2014; Portland, USA, in 2016; Aachen, Germany, in 2018 and IIT Roorkee, India, in 2022. The present ISHS will be followed by 9th IJREWHS on 20 June, 2024 to foster exchange between members of this group and offer mentorship by experienced ISHS members.

Symposium Themes

Regulation Structures
Dams and weirs
Spillways
Ship locks
Gates and valves
Intakes and outlets

Flow Conveyance Structures
Canals and river training structures
High-head penstocks
Surge tanks

Energy Dissipation
Stilling basins
Stepped spillways
Jets and plunge pools

Physical, Numerical & Hybrid Modeling
Instrumentation
Scale effects
Validation and verification

Prototype Measurements
Case studies
Instrumentation
Design optimization and retrofits

Environmental and Ecological
Impacts
Gas transfer
Stratification
Turbidity currents
Scour
Riverbed stabilization

Best Practices in Risk Management
Dam safety and rehabilitation
Risk and hazard assessment
Debris management structures
Sustainable design
Adaptation to climate change

Coastal Structures and Waves

Special Sessions
Fish passage
Sediment management techniques
Aerated high-speed flows and design of low-level dam outlets
Large wood risk assessment and management

9th International Junior Researcher and Engineer Workshop on Hydraulic Structures, 20 June 2024

Young professionals are invited to participate in a 1-day workshop where participants will have an opportunity to present and discuss their projects and research, attend a keynote lecture on writing, and receive mentoring and feedback from senior experts. You may opt to have your paper included in the Workshop Proceedings (separate from ISHS) and participate in the peer-review process. Workshop Chair is Dr. Elena Pummer of NTNU.

Technical Tour, 19 June 2024

• Spitallamm dam near Grimsel Pass, Canton of Bern: Replacement of the arch-gravity Spitallamm dam with a new double-curved arch dam, Kraftwerke Oberhasli AG.

• Flood protection project of Zurich: large wood retention rack on the Sihl river and tunnel intake structure under construction in Gattikon, Canton of Zurich.

Spittallamm Dam, © David Birri

Flood Protection of Zurich, © Kanton Zürich

Key Dates

Abstract submission	**1 October 2023**
Abstract acceptance	**22 October 2023**
Full paper submission	10 January 2024 28
Notification of acceptance	January 2024 25
Revised papers submission	February 2024 17
Notification of final acceptance	March 2024
Registration opens	18 March 2024
Registration closes	31 May 2024
Symposium	17-18 June 2024
Technical tour	19 June 2024
Young professionals' workshop	20 June 2024

Paper Submission

Authors are invited to submit abstracts (in English) by September 17, 2023. Instructions are available on the Symposium webpage (www.ishs2024.ethz.ch). The abstracts will be peer-reviewed by the International Scientific Committee (ISC). Full papers or extended abstracts will be required for all accepted abstracts, peer reviewed by ISC and will be included in the Proceedings of the Symposium (electronic format). The technical program will consider oral and poster presentations; the form of presentation for each paper will be decided upon receipt of the final version.

The best technical paper presented during the International Symposium on Hydraulic Structures 2024 will receive the **Philip H. Burgi Best Paper Award**.

Travel Information

Zurich can be reached easily by plane, train, or car. The Zurich International Airport offers regular connections to many countries in Europe and to major airports worldwide. Further information can be reached at https://www.flughafen-zuerich.ch/en/passengers. The airport is located about 11 km from the venue and is easily accessible by car, tram and train. A free bus link is available between the city centre and the symposium venue.

© ETH Zürich