

## Preface

The 42nd International School of Hydraulics, titled “Freshwater System Health: A Hydraulic Perspective”, held on May 20–23, 2025, in Radocza near Kraków, continued a series of events focused on broadly understood hydraulics. The conference covered the fundamentals of hydraulics in the context of understanding and managing the health of rivers, lakes, and other aquatic ecosystems. It highlighted new and challenging topics in both applied and basic research. ISH2025 aimed to foster a fruitful exchange of knowledge, ideas, and experiences in various fields of hydro-environment research. It also served as a platform for intellectual growth, collaboration, and innovation, helping to build new connections and strengthen existing ones. ISH2025 sought not only to provide answers and explore new ideas, but also to offer a global forum for scholars, decision-makers, and enterprises sharing a common interest in the field.

It is a great privilege for us to present the proceedings of ISH2025 to the authors and delegates of the event. The proceedings contain abstracts and extended abstracts of all presentations delivered during the meeting. Please note that selected full papers will be published in a separate volume. We hope you find this collection useful and inspiring.

In summary, ISH2025 included four keynote lectures, two invited lectures, and around 40 presentations, attracting a diverse range of contributors and presenters from nine countries across three continents. This diversity is a testament to the international reach of our School, fostering interdisciplinary collaboration, intellectual growth, and exchange. This School is a joint initiative of the Institute of Geophysics, Polish Academy of Sciences, and the newly established Committee of Water Science and Water Management of the Polish Academy of Sciences. It is organized under the auspices of the International Association for Hydro-Environment Engineering and Research (IAHR), in partnership with State Water Holding Polish Waters.

We would like to express our gratitude to all authors and participants, the members of the scientific committee, and especially the organizing team for making this School possible. We also extend our appreciation to all reviewers who helped us maintain the high quality of the manuscripts included in the proceedings. We look forward to continuing our collaboration in the future.

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School Chairs