

## ADVANCED NUMERICAL STUDY FOR HYDRAULIC ENGINEERING

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### ABSTRACT

Hydraulics is a field of study and technological development focused on flood control, water utilization, and environmental conservation, encompassing areas from watersheds to rivers, lakes and estuaries. In addition to laboratory experiments and field observations, the development of numerical analysis techniques in hydraulic engineering has been remarkable over the past few decades. With improvements in computing resources and the proposal of various analytical techniques, “Computational Hydraulics” is undergoing significant evolution. Currently, climate change is causing unprecedented flooding due to extreme rainfall, leading to frequent occurrences worldwide. The need for the computational hydraulics capable of predicting these extreme floods is greater than ever.

The purpose of this session is to share the current state and future challenges of cutting-edge Computational Hydraulics technologies being developed around the world, contributing to the future development of this field.