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The Application of Hydraulic Model and Numerical Simulation in River Engineering

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Message from the Guest Editors

Dear Colleagues,

River engineering involves the control and use of rivers. Numerical tools have seen widespread adoption owing to their reliability in predicting flow behavior and in-depth analysis of the variables involved. And hydraulic model testing remains relevant in many advanced and complex problems. Indeed, combining experimental work with numerical tools allows us to bridge the individual limits of each method. In this scope, machine learning has also been gaining much attention, with promising results regarding flow hydrodynamics.

As such, this Special Issue invites contributions related (but not limited) to the latest developments or employment of hydraulic models, advanced methods of numerical simulations, and strategies involving machine learning and artificial intelligence. We welcome research shedding light on complex hydrodynamics (influenced by hydraulic conditions, presence of vegetation, or sediment transport), the performance of hydraulic structures, and even the adaptation and resilience of river systems to climate change and pollution.

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Guest Editors

Special Issue



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Message from the Editor-in-Chief

In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

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