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Innovative Model Strategies in Hydraulics

Guest Editor:

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Deadline for manuscript submissions:
closed (30 June 2020)

Message from the Guest Editor

Physical hydraulic modelling at reduced size is an important research and engineering method to understand complex fluid flows, to design, optimise and visualise sound engineering solutions and to provide data to calibrate and validate numerical models.

A major limitation of laboratory models are model and scale effects. Innovative strategies to model complex hydraulic phenomena, to avoid, compensate or correct scale effects and to improve model-prototype similarity have been developed over the years. These include experimental and numerical scale series to quantify scale effects, distorted models in fluvial hydraulics, cavitation tunnels, the replacement of water with another fluid and the experimental exploitation of Reynolds number invariance.

This Special Issue is dedicated to such scaling and model strategies in hydraulics. It aims to present research papers, reviews (state of the art) and case studies of novel, innovative and/or non-standard laboratory strategies to model complex fluid flows and to improve model-prototype similarity by overcoming scale effects. I am looking forward to receiving original and innovative contributions of high quality.

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Editor-in-Chief

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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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Journal Rank: JCR - Q2 (*Water Resources*) / CiteScore - Q1 (*Geography, Planning and Development*)

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