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## Hydraulic Dynamic Calculation and Simulation

Guest Editor:

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Deadline for manuscript  
submissions:

**closed (31 January 2021)**

### Message from the Guest Editor

"Hydraulic dynamic calculation and simulation" can be regarded as important tools to analyze and predict many physical processes and their related problems, along with decision making for mitigative measures. Most relevant application fields are 1) flow and transport processes of single or multiphase fluids (water, oil, gas) in pipe networks, 2) hydraulic transients water hammer problems in pipelines, 3) use of hydraulic machineries in industrial water systems (pumps), for energy conversion in hydropower stations (turbines), or pumps as turbines (PAT) in pumped-storage hydropower stations, 4) use of micro-turbine, pressure reducing valves and needle valves, installed in distribution or transport water networks.

This Special Issue invites original experimental, analytical and computational research works in these fields. The special issue also welcomes innovative fluid-dynamic and fluid-structure-interaction (FSI) studies and applications of research and commercial numerical solvers, to investigate the effects of air entrapment and cavitation in pipes, as well as vortices induced by cavitation and tip leakage flows in turbomachineries and water plants or in hydropower stations.



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# 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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