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## Scientific Advances vs. Engineering Challenges on Flood Design and Risk Assessment under Uncertainty

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**closed (30 September 2019)**

### Message from the Guest Editors

With the intensification of catastrophic flood events worldwide, it is critical to account for changing issues and associated uncertainties in the design of hydraulic infrastructures and the preparation of flood risk management plans. On the other hand, the practical use of change and uncertainty in hydro-environmental sciences is rather limited among stakeholders and practitioners. In this context, the specific topics include, but are not limited to:

- The recognition and quantification of different sources of uncertainty within flood simulation and forecasting;
- Stochastic vs. deterministic interpretations of hydroclimatic and environmental changes and their impact on flood estimations;
- Revisiting classical flood modelling concepts, assumptions, formulae, and associated design recipes;
- The presentation of novel approaches for flood risk assessment;
- The evaluation of uncertainties of flood-awareness systems;
- Know-how transfer of uncertainty to decision-making processes and the flood engineering industry.



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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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