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Water Resources Management: Advances in Machine Learning Approaches

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Deadline for manuscript submissions:

closed (30 April 2021)

Message from the Guest Editor

Water resources management at the catchment level is a scientific discipline with great environmental importance. Machine learning approaches are a very powerful tool for the simulation, prediction, optimization, assessment and management of catchment water resources. For many decades, a high number of both deterministic and stochastic models for the simulation and optimization of catchment water resources have been very successfully applied. Machine learning approaches are the first step of artificial intelligence, and can give more integrated answers to both quantitative and qualitative water management problems at the catchment level:

- a) Water quantity management: evapotranspiration models; water balance models; land cover and land use; agricultural, domestic, industrial and environmental use of water.
- b) Water quality management: water temperature; dissolved oxygen; chlorophyll-a; electrical conductivity of water; eutrophication indexes; rivers, lakes, wetlands, deltas, internal and transitional waters.



mdpi.com/si/39218

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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 (Aquatic Science)

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