Special Issue

Integrating Artificial Intelligence in Hydrology, Hydrodynamics and Water Quality for Sustainable Water Management

Message from the Guest Editors

This Special Issue aims to explore the integration of Artificial Intelligence (AI) in hydrological, hydrodynamics, and water quality modelling for Sustainable Water Management. Research areas may include the following: Hindcasting or forecasting environmental time series (pollutants, precipitation, groundwater recharge, salinity, tides, wind, etc.) using neural networks under changing climate. Assessment of regulatory water quality parameters compliance in rivers and estuaries using fuzzy sets to account for climate change and sea level rise. In water quality and salinity modelling, a water body is discretized in spatial cells or elements to estimate the concentrations of a particular pollutant in each cell or element. The state of neighbouring cells/elements determines the state of each cell or element. Cellular automata algorithms also postulate that the states of the adjacent cells can determine each cell's state and that their evolution over time determines the entire system's behavior. Cellular automata use simple transition rules to simulate local–global dynamics and may be better suited to capture changes in water bodies' boundaries due to climate change.

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I encourage you to contribute a research or comprehensive review article for consideration for publication in *Sustainability*, an international Open Access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. *Sustainability* publishes original research articles, review articles and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

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