

USING ARTIFICIAL INTELLIGENCE IN HYDROLOGY AND IRRIGATION

GUEST EDITOR

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DESCRIPTION

Climate change is going to happen widely on our planet and it can affect crop product performance. Then researchers are trying to find the best ways by more product performances in different climates. Additionally, product performance is directly related to irrigation efficiency and hydrologic models. Having more accurate models in irrigation and hydrological sciences can control irrigation programs and water demands in different climates. Therefore, fundamental changes in the water resources regimes affect the process of agricultural programs around the world. The main priority is to develop suitable methods and models in order to establish, simulate, and predict the optimal management and use of available water resources in agriculture.

In recent years, appropriate models such as artificial intelligence (AI) have been widely used in many research areas and applications and it proved a suitable performance in environmental sciences such as hydrology and irrigation studies. AI allows us to understand more about hydrology and irrigation in different regions. However, AI can give to researchers a new view for solving the challenges and overcoming the hydrological and irrigation challenges. In addition, the high capability of AI such as big data handling, handling the complexity of problems, high simulation speed, and high accuracy results can be used for future potential researchers.

In this Guest Editor would like to invite research works which incorporate AI techniques in hydrology and irrigation, such as (but not restricted to):

- ▶ Hydrological modeling by AI
- ▶ Agro-Hydrological and Agro-Ecosystem Models: application of AI
- ▶ Studying about irrigation efficiency and irrigation scheduling by AI
- ▶ Using AI for crop modeling, improving crop water productivity, and crop management
- ▶ Soil and water management challenges: solutions by AI approaches
- ▶ Precision irrigation strategies and hydrological models by AI
- ▶ Climate, water, and soil modeling using AI
- ▶ Using optimization algorithms in agricultural water management

HOW TO SUBMIT

The authors are kindly invited to submit their contribution via online submission system Editorial Manager available at <http://www.editorialmanager.com/opag/> and choose Section '**Special Issue on Using Artificial Intelligence in Hydrology and Irrigation**' while submitting their work.

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