Special Issue

Mathematical Simulation and Validation of a Wastewater Treatment Plant

Message from the Guest Editor

Human activities lead to the increase of pollutants in surface and groundwaters, via the effluent of wastewater treatment plants (WWTPs). Scientific and technological interests have been focused on upgrading the chemical and biological processes in WWTPs and on implementing new technologies to improve activated sludge processes. The technological improvement, in combination with the ability to predict the operation of a WWTP, is a tool for operating control under real conditions. Special Issue aims to shed light on modeling approaches that focus on the simulation of chemical and biological processes in WWTPs. The mathematical models are able to identify the key operating and environmental conditions, revealing those that lead to the best performance of the WWTP. The use of an aquaret mathematical, may lead to better control and design of the plant. Keywords:

- wastewater treatment plant (WWTP) operation
- wastewater and sewage sludge treatment
- municipal and industrial wastewater treatment
- mathematical modeling of WWTP operation
- model's calibration and validation
- activated sludge models
- prediction tools
- simulation under real operating conditions

Guest Editor

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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.

Editor-in-Chief

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