

ICWRER 2016

Special Session: Optimum Management of Water Resources and Environmental Systems

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Abstract: The stresses placed on our water resources and environmental systems by human activity are well known. For a number of years, researchers have investigated the use of optimization techniques in order to achieve improved management of these systems. There is still much to be done in this area including the need to clearly identify objectives and constraints on the systems, improving optimization techniques so that they achieve realistic outcomes in a reasonable amount of time, dealing with many objective problems, applying optimization to real world problems, interacting with decision-makers so that the results of the optimization are relevant and acceptable to the community, dealing with uncertainty and multiple futures through scenario analysis and other techniques.

This special session will include papers in a number of these areas or others related to the issues arising in the optimum management of water resources and environmental systems. The papers could discuss new optimization techniques, applications of optimization to real world problems or non-mathematical methods directed towards achieving optimal outcomes. Interactions with decision-makers and issues in identifying objectives are also of interest. Application areas will be in any field of water resources or environmental management including water resources planning, management and operations, wastewater systems, groundwater, stormwater management, discharges to receiving waters, waste management or environmental flows