



Classification and uptake of reservoir operation optimization methods

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Reservoir operation optimization algorithms aim to improve the quality of reservoir release and transfer decisions. They achieve this by creating and optimizing the reservoir operating policy; a function that returns decisions based on the current system state. A range of mathematical optimization algorithms and techniques has been applied to the reservoir operation problem of policy optimization. In this work, we propose a classification of reservoir optimization approaches by focusing on the formulation of the water management problem rather than the optimization algorithm type. We believe that decision makers and operators will find it easier to navigate a classification system based on the problem characteristics, something they can clearly define, rather than the optimization algorithm. Part of this study includes an investigation regarding the extent of algorithm uptake and the possible reasons that limit real world application.