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Titolo	Modeling, Control and Optimization of Water Systems : Systems Engineering Methods for Control and Decision Making Tasks / / edited by Thomas Rauschenbach
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Descrizione fisica	1 online resource (308 p.)
Disciplina	628.1
Soggetti	Control engineering Water-supply Hydrogeology Engineering geology Engineering—Geology Foundations Hydraulics Control and Systems Theory Water Industry/Water Technologies Geoengineering, Foundations, Hydraulics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Surface water modelling -- Groundwater modelling -- Coupling of groundwater and surface water models -- Simulation of pipeline systems -- Model based decision support systems -- Applications.
Sommario/riassunto	This book provides essential background knowledge on the development of model-based real-world solutions in the field of control and decision making for water systems. It presents system engineering methods for modelling surface water and groundwater resources as well as water transportation systems (rivers, channels and pipelines). The models in turn provide information on both the water quantity (flow rates, water levels) of surface water and groundwater and on water quality. In addition, methods for modelling and predicting

water demand are described. Sample applications of the models are presented, such as a water allocation decision support system for semi-arid regions, a multiple-criteria control model for run-of-river hydropower plants, and a supply network simulation for public services.