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Titolo	Transport of Water versus Transport over Water : Exploring the Dynamic Interplay of Transport and Water / / edited by Carlos Ocampo-Martinez, Rudy R. Negenborn
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Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Perspectives on Transport of Water Versus Transport Over Water -- Model Predictive Control for Combined Water Supply and Navigability/Sustainability in River Systems -- Data Assimilation to Improve Models Used for the Automatic Control of Rivers or Canals -- Distributed LQG Control for Multiobjective Control of Water Canals -- Forecasting and Predictive Control of the Dutch Canal Network -- Transport of Water Versus Particular Transport in Open-Channel Networks -- Coordinating Model Predictive Control of Transport and Supply Water Systems -- Effects of Uncertain Control in Transport of Water in a River-Wetland System of the Low Magdalena River, Columbia -- Automatic Tuning of PI Controllers for Water Level Regulation of a Multi-Pool Open-Channel Hydraulic System -- Hierarchical MPC-Based Control of an Irrigation Canal -- Model Predictive Control for Incorporating Transport of Water and Transport Over Water in the Dry Season -- Enhancing Inland Navigation by Model Predictive Control of Water Levels: The Cuinchy-Fontinettes Case -- Effects of Water Flow on

Energy Consumption and Travel Times of Micro-Ferries for Energy-Efficient Transport Over Water -- Potential Fields in Modeling Transport Over Water -- Safe and Efficient Port Approach by Vessel Traffic Management in Waterways -- Technological Challenges and Developments in European Inland Waterway Transport -- Wave Filtering and Dynamic Positioning of Marine Vessels Using a Linear Design Model: Theory and Experiments -- Closed-Loop Identification and Control of Inland Vessels -- Nonlinear Iterative Control of Maneuvering Models for Transport Over Water -- Performance Evaluation of an Inland Pusher -- City Logistics by Water: Good Practices and Scope for Expansion -- Reactivation of the Small Inland Waterway Network -- Fostering Cooperation in Inland Waterway Networks: A Gaming and Simulation Approach.

Sommario/riassunto

This book aims at stimulating discussion between researchers working on state of the art approaches for operational control and design of transport of water on the one hand and researchers working on state of the art approaches for transport over water on the other hand. The main contribution of the book as a whole is to present novel perspectives ultimately leading to the management of an envisioned unified management framework taking the recent advances from both worlds as a baseline. The book is intended to be a reference for control-oriented engineers who manage water systems with either or both purposes in mind (transport of water, transport of goods over water). It highlights the possible twofold nature of water projects, where water either acts as primary object of study or as a means. The book is dedicated to comparing and relating to one another different strategies for (operational) management and control of different but strongly related systems in the framework of the water. In that sense, the book presents different approaches treating both the transport of water and transport over water. It compares the different approaches within the same field, highlighting their distinguishing features and advantages according to selected qualitative indices, and demonstrates the interaction and cross-relations between both fields. It will also help to determine the gaps and common points for both fields towards the design of such a unifying framework, which is lacking in the literature. Additionally, the book looks at case studies where the design of modeling/control strategies of either transport of water or transport over water have been proposed, discussed or simulated.