Today, multi-disciplinarity is the key to tackle challenges for the sustainable management of water resources, especially considering the increasing complexity in the water world. It is thus fundamental to link the mathematical laws describing water bodies and the new technologies given by the ICT and information science scientific communities.

The 16 chapters in this book cover five main topics: numerical models to predict the water hydrodynamic in terms of flow fields and contaminant dispersion; problems related to floods in urban and coastal areas and to wastewater treatments; problems concerning water distribution networks; hydrological and climate change problems; and groundwater and erosion.

The complexity of the problems and the different approaches used within the chapters of this book clearly show the multi-disciplinary nature of the research focused on water bodies. Thanks to the vivacity of the hydroinformatics community, day by day fundamental advances are made in understanding complex phenomena related to water physics as well as in novel methodologies and tools to drive sustainable and efficient management of natural and artificial water systems.

In Focus – a book series that showcases the latest accomplishments in water research. Each book focuses on a specialist area with papers from top experts in the field. It aims to be a vehicle for in-depth understanding and inspire further conversations in the sector.