HYDROLOGICAL MODELLING
AND THE WATER CYCLE
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Preface

This volume is a collection of a selected number of articles based on presentations at the 2005 L’Aquila (Italy) Summer School on the topic of “Hydrologic Modeling and Water Cycle: Coupling of the Atmosphere and Hydrological Models”. The primary focus of this volume is on hydrologic modeling and their data requirements, especially precipitation. As the field of hydrologic modeling is experiencing rapid development and transition to application of distributed models, many challenges including overcoming the requirements of compatible observations of inputs and outputs must be addressed. A number of papers address the recent advances in the State-of-the-art distributed precipitation estimation from satellites. A number of articles address the issues related to the data merging and use of geo-statistical techniques for addressing data limitations at spatial resolutions to capture the heterogeneity of physical processes.

The participants at the School came from diverse backgrounds and the level of interest and active involvement in the discussions clearly demonstrated the importance the scientific community places on challenges related to the coupling of atmospheric and hydrologic models.

Along with my colleagues Dr. Erika Coppola and Dr. Kuolin Hsu, co-directors of the School, we greatly appreciate the invited lectures and all the participants. The members of the local organizing committee, Drs Barbara Tomassetti; Marco Verdecchia and Guido Visconti were instrumental in the success of the school and their contributions, both scientifically and organizationally are much appreciated.

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Soroosh Sorooshian
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Hydrological modelling and water cycle
Coupling of the atmospheric and hydrological models.
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