



Special Issue

Quantifying Uncertainty in Integrated Catchment Studies

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Message from the Guest Editors

Integrated catchment modelling is defined as the simulation of the linkage between the several sub-models, simulating processes of the water cycle (rural and urban) starting from the meteorological input, until the final recipient. These integrated catchment studies can be used to plan projects, to optimise systems, as well as to evaluate the need of certain measures. However, the stepwise process of abstraction from reality to model representation with its simplifications and idealisations of the real systems comes with the unavoidable occurrence of uncertainties. The definition, recognition and consideration of these uncertainties is, therefore, of the utmost importance for applying such models and for the interpretation of model results, in real world problems.

In this Special Issue we would like to invite research on integrated catchment studies for both quantity and quality modelling, specially focusing on the quantification of the uncertainty. Manuscripts which are coping with the following topics are specifically invited:

- quantification and the propagation of uncertainty at significant temporal and spatial scales in catchments
- approaches for minimising uncertainties in integrated models
- techniques for model reduction of computationally expensive models
- real world case studies on integrated catchment modelling
- tools, which can be deployed by end users considering all aspects of modelling uncertainty and hence they are able to be used in the context of the decision-making process

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