

## Guest editorial to the special issue modelling of river hazards

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We thank Springer publishers and the managers and editorial staff of Natural Hazards for inviting us to guest-edit this special issue on Modelling of River Hazards. We also thank the authors for their great contributions and the referees for making this possible through their objective reviews in a timely fashion.

This special issue has ten papers. In view of the recent terrible floods in Pakistan, where some 22 Million people were affected to various degrees, the first paper on the assessment of potential riverbanks failures during flooding is very timely. Since flooding can occur when a dam breaches, one can get very relevant geotechnical information from the second paper.

Lot of numerical modelling of river hazards now depends extensively on advanced statistical techniques. One such new method is presented on the third paper. Flooding not only causes loss of life, but also may lead to serious water contamination and pollution problems, which are dealt with in paper four.

To be effective and useful, numerical models of rivers have to be up to date and well tested. Papers five and six are good practical applications of numerical river models to Rideau river watershed in Canada. The seventh paper deals with the important topic of failure probabilities of flood defense systems.

Paper eight is about the river–flood plain interaction during flood propagation. Paper nine deals with the stochastic aspects of safety assessment of flood defense systems. The final paper is about geomorphic thresholds for floodplain instability and braiding of rivers in a semi-arid environment.

We hope that these papers collectively provide useful and up-to-date information on the present status of numerical modeling of river hazards.

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