

## **Preface to the ISPRS Workshop: “The Role of Geomatics for Hydrogeological Risk”**

The ISPRS Workshop entitled “The Role of Geomatics for Hydrogeological Risk” was held at the University of Padua, Italy, the 27<sup>th</sup> and 28<sup>th</sup> of February 2013. Eighty-three participants attended, and forty-two contributions in the form of posters and oral presentations were available over the two days of the event. Most authors submitted their contribution to the double blind peer-review process. All accepted articles are included in this volume of ISPRS Archives.

Hydrogeological risk is a very heart-felt topic; the events which recently occurred in different areas of the planet remind, with hard evidence, what the impact and devastation brought to the population can be. The importance of research on methods to support prediction, mitigation and post-disaster relief measures - from local to regional scale - is obviously a critical aspect. Italy, as host country of the workshop, has 88% of its towns with areas exposed to some type of hazard. Implementing a research and development value-chain will support decision makers and act as leverage for jobs for young researchers and related start-ups.

The following contributions report case-studies of geomatic methods applied to different aspects of hydrogeological risk analysis. Spatial scales range from monitoring deformations in a single building complex to monitoring movements of large landslides; topics range over the use of GPS for meteorological applications, LiDAR for high-resolution Digital Terrain Models, web protocols for processing data on a collaborative basis, neural network approaches on remote sensing images, all the way to international initiatives for mitigation of flood hazards. The concluding remark ranges on applications of geomatic methods on data of high value for the assessment of hydrogeological risk, where high and documented quality, can be used efficiently for modeling, prediction, and correct post-disaster management.

As it is with all technologies, it is the right tool in the right hands that makes the difference. We hope this volume will contribute to knowledge in this field.

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