Editorial

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This special issue of *Rock Mechanics and Rock Engineering* includes 14 papers on “Water issues in underground excavations”. The majority of these papers expand technical contributions presented at the Italian–Norwegian Bilateral Workshop, which took place in Trondheim, Norway on February 8–9 2011. A few other papers were solicited by the editors and added to the special issue afterwards.

Norway and Italy have developed strong experience in long, deep tunnel excavation in hard rock under a high water head: Norway, in order to excavate tunnels underpassing the fjords; Italy, for the excavation of road and rail tunnels under the Alps and the Apennines, including base tunnels. The experience gained and the lessons learned contribute to improving the understanding of problems dealing with both groundwater flow and preservation of water resources.

The range of the topics covered is broad and includes the assessment of the geological and hydrogeological parameters which are needed for predicting water inflow and the observed behavior through groundwater monitoring and modelling. The evaluation of the hydrogeological effects of draining tunnels and the preservation of water resources are also discussed, together with the advanced technologies developed for waterproofing and rock mass grouting. The most attention is dedicated to practical experience and in situ applications. A number of case histories are presented.

All the papers were written and uploaded into the Journal’s Editorial Manager System. Following the usual thorough review process, the accepted papers were published online. With this process concluded, the special issue is now presented to our readers.

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