

PRESENTATION

by

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On a regular basis, the “Associazione Italiana di Geologia Applicata e Ambientale” (AIGA) organises its National Congress, which is intended for all researchers working in the broad field of engineering geology and environmental geology. The “Italian Journal of Engineering Geology and Environment” (IJEGE), which makes part of the ISI and Scopus databases, is the reference journal of AIGA.

This special issue/special book of IJEGE features some of the papers submitted to the 5th National Congress of AIGA, held in Cagliari on 29-30 April 2015. The book consists of 11 papers that the IJEGE Editorial Board and the Congress Organising Committee selected among the 85 contributions (oral sessions and poster sessions) presented during the Congress.

The selected papers provide a detailed overview of the activities carried out in this sector and spanning the typical fields of engineering geology. The topics covered by the papers are landsliding, groundwater resources and floods within all the geological settings of Italy, including islands.

In particular, as regards Liguria, CEVASCO, PEPE, D’AMATO AVANZI and GIANNECCHINI describe the instability of one of the slopes of the Val Lavagna valley and correlate this triggering factor with the event that took place there on 10 November 2014.

The region of Campania is the focus of the study that CORNIELLO, DUCCI and MONTI conducted to identify the recharge areas of the Aterno basin (“Conca di Aterno”) springs.

The paper by CORSINI, CICCARESE, DIENA, TRUFFELLI, ALBERONI and AMORATI describes the features of the debris flows that occurred in the Val Parma and Val Baganza valleys (Emilia-Romagna region) during the 2014 flood.

DA PELO, GHIGLIERI, BUTTAU, BIDDAU, CUZZOCREA, FUNEDDA, CARLETTI, VACCA and CIDU propose a methodological approach to reconstruct and define the hydrogeological characteristics of a complex aquifer located in the Nurra area of north-western Sardinia.

In connection with the above-mentioned weather event in

Liguria, FACCINI, GIOSTRELLA, MELILLO, SACCHINI and SANTANGELO present a report on the Chiavari flood, in the metropolitan area of Genoa.

FODDIS, MATZEU, MONTISCI and URAS tackle the issue of nitrate-contaminated sites and of the aquifer located in the coastal plain of Arborea, central-western Sardinia.

The study conducted by Frodella, Morelli and Pazzi, with three different methodologies, concerns the geomorphology and monitoring of the deep-seated gravitational slope deformation of Mount Rotolon, Val d’Agno Valley (Veneto), where infrared thermography (IRT) was used successfully.

In southern Italy, namely in Apulia, LONIGRO, GENTILE and POLEMIO highlight the relations between climate changes and land-use changes and describe their impact on the occurrence of hydrogeological instability events.

PAPPALARDO, MINEO and CALCATERRA report the findings from their study (based on IRT and other techniques) on the stability of the rock slopes of north-eastern Sicily and, namely, from their analyses of rock wedges in highly jointed rock masses.

PICCININI, FABBRI, POLA and MARCOLONGO used geostatistical modelling in combination with the transition probability method, as well as numerical modelling of groundwater flowpaths to demarcate the protection zones of some drinking water wells located in the middle part of the plains of the Veneto region.

SCIARRA, CALISTA, MICCADEI, PASCULLI, PIACENTINI and SCIARRA present the findings from their study on a massive, complex landsliding process occurring at Montebello sul Sangro (central Abruzzi). The study relies on new morphometric analyses of surface drainage networks, multi-temporal geomorphic investigations and final-testing-oriented numerical modelling.

Gabriele Uras, guest editor for this IJEGE Special Issue/Special Book, and Alberto Prestininzi, Scientific Editor-in-chief of IJEGE, thank the numerous referees/reviewers of the selected papers for their invaluable contribution.