





XIII ISL 13th International Symposium on Landslides

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Edited by: Miguel Angel Cabrera, Luis Felipe Prada-Sarmiento & Juan Montero February 2021

Foreword

In association with the Joint Technical Committee on Natural Slopes and Landslides (JTC1) and the Federation of International Geo-engineering Societies (FedIGS), which groups the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE), the International Society of Rock Mechanics (ISRM), and the International Association of Engineering Geology (IAEG), the Colombian Geotechnical Society (SCG) organized the 13th International Symposium on Landslides (XIII ISL), from February 22nd to 26th, 2021. This event was originally scheduled to be held in face-to-face mode in Cartagena, Colombia in June 2020, but due to the SARS-CoV-2 pandemic it had to be postponed for eight months and rescheduled in an online platform.

The virtual conference includes the presentation of eleven (11) Keynote Lectures by Marta Lucía Calvache (Colombia), Jordi Corominas (Spain), Giovanni B. Crosta (Italy), Ken Ho (Hong Kong), Sergio Mora (Costa Rica), Charles Wang Wai NG (Hong Kong), Dave Petley (England), Luciano Picarelli (Italy), Núria Pinyol (Spain), Ikuo Towhata (Japan), and Cees Van Westen (Netherlands), and the presentations of 115 papers selected by the Technical-Scientific Sub-Committee. The presentations consist of a series of online sessions, with participants from around the World, and include a virtual commercial exhibition with the participation of software companies, manufacturers of geotechnical equipment and materials, and consulting firms. The XIII ISL Proceedings consists of 11 Keynote papers and 114 accepted papers.

The papers submitted to the XIII ISL are distributed into the following subjects:

- 27 papers in Weather and Landslides
- 6 papers in Landslides and Seismo-Tectonic and Volcanic Activity
- 8 papers in Landslides and Human Activities
- papers in Effects of Landslides with emphasis on Infrastructure and Sustainable Development
- 59 papers in Landslide Risk Assessment and Management

The international Symposium on Landslides has a long and successful history that has brought geoscientists and other interested people together for four decades around the common theme of landslides. The Symposium started in 1972 in Kyoto, Japan followed by a successful series of Symposiums, leading to the most recent editions in Rio de Janeiro, Brazil (IX ISL 2004), Xi'an, China (X ISL 2008), in Alberta, Canada (XI ISL 2012), and in Naples, Italy (XII ISL 2016). The XIII ISL is designed as the meeting point for engineers, geologists, geoscientists, planners, economists and decision makers on the common topic of landslides and their impact on Society and Environment.

Acknowledgments

The Colombian Geotechnical Society (SCG), through its President, Ramiro CASTELLANOS, the SCG Board of Directors, and the Organizing Committee of the XIII ISL are deeply grateful to the international societies and organizations that lead the geotechnical activity at the international level, in particular to the ISSMGE, the ISRM, the IAEG and the FedIGS for their permanent support and encouragement.

At the national level, to the universities: Pontificia Universidad Javeriana, Universidad de los Andes, Universidad Nacional de Colombia; and to the institutions: Colombian Geological Service, IDEAM, MINAMBIENTE and ANI, all members of the Institutional Support Committee.

The Direction of the Symposium is grateful to the SCG Board of Directors and to the Technical-Scientific Sub-Committee, in particular to Luis Felipe PRADA-SARMIENTO, and Miguel Angel Cabrera, for their permanent and selfless efficient management, and finally to Professor Luciano Picarelli, President of the JTC1, for its ongoing encouragement and support.

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