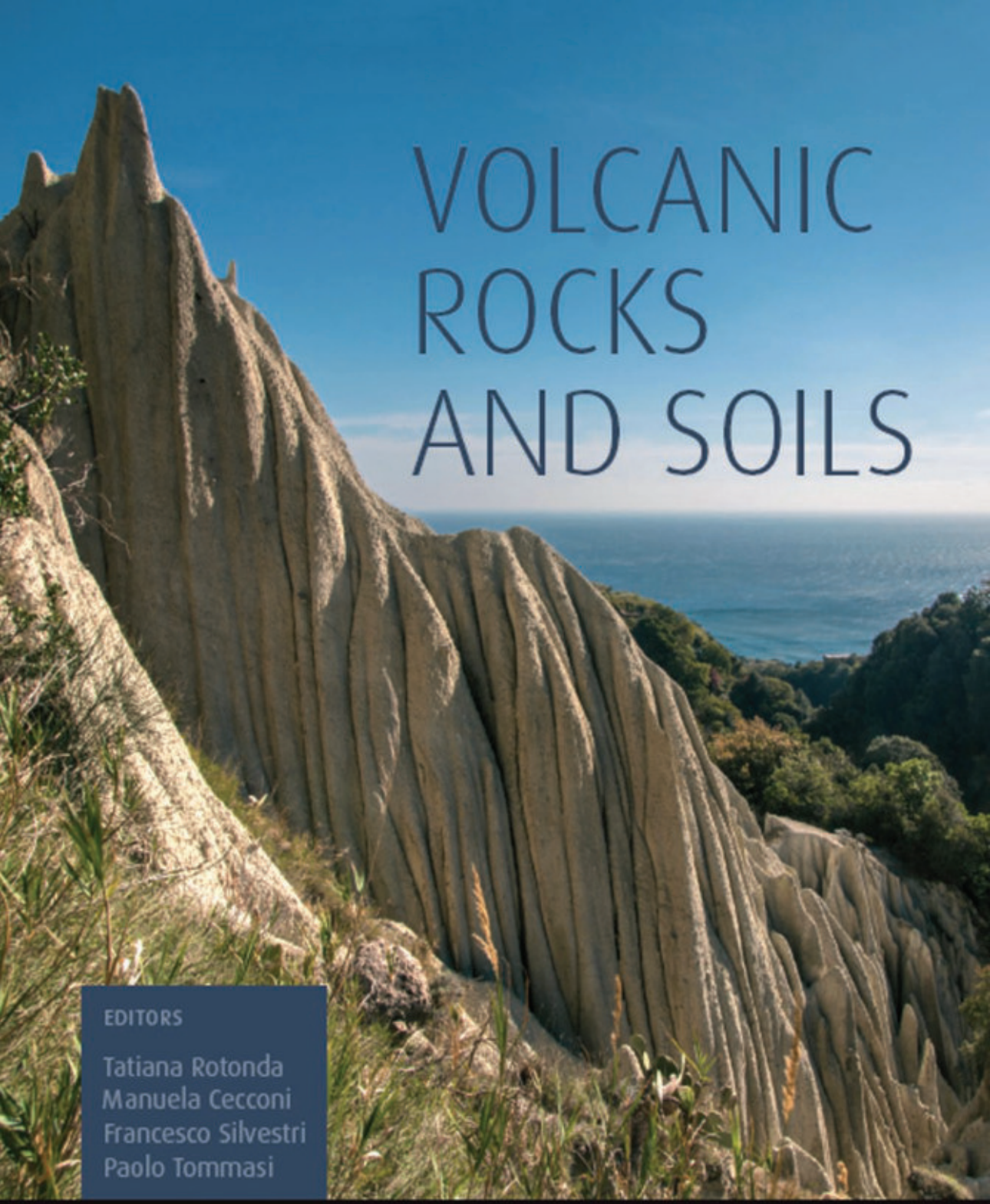

VOLCANIC ROCKS AND SOILS

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Francesco Silvestri
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PROCEEDINGS OF THE INTERNATIONAL WORKSHOP ON VOLCANIC ROCKS AND SOILS
LACCO AMENO, ISCHIA ISLAND, ITALY, 24–25 SEPTEMBER 2016

Volcanic Rocks and Soils

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Cover photo: (front) Erosional forms in the Pizzi Bianchi tuffs, Ischia Island (courtesy of www.prontoischia.it)
(back) Cliff on the left bank of the Cava Scura canyon (Pizzi Bianchi tuffs), Ischia Island (by Paolo Tommasi)

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Preface

According to tradition, after the first three Workshops on Volcanic Rocks were held respectively on Madeira, on the Azores and on Tenerife, also the fourth edition of this event is hosted on a volcanic island, Ischia.

The island of Ischia is very famous worldwide for the beauty of its nature (it is known as "the Green Island") and for its thermal springs. It is located in a wide volcanic area surrounded by two main active volcanic districts. The first one, known all over the world, is the Somma-Vesuvius, located East of the Bay of Naples. The second volcanic district is sited to the West of Naples and it is formed by some tens of volcanic craters, of different size and age. This area is called Phlegraean Fields, whose name derives from the Greek word, φλέγω, which means "to burn". It is covered by rocks (Campanian ignimbrite, Neapolitan Yellow tuff, etc.) and soils (pozzolanas, ashes, pumices), which outcrop in the city of Naples and are spread throughout large parts of the Campania Region. Another famous site is the small city of Pozzuoli, that gave the name "Pozzolana" to the well-graded pyroclastic soil, very diffused in the area and used, since the Roman period, as a component of cements.

For this Workshop the Organising Committee decided to consider both volcanic rocks and soils, which are widespread throughout Central and Southern Italy, and particularly in the Campanian volcanic district. The Organising Committee is grateful to the Associazione Geotecnica Italiana (AGI) for the organization of the event and both the International Society for Rock Mechanics (ISRM) and the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) for having co-sponsored the event.

The aim of the Workshop is to bring together geotechnical engineers, geologists, volcanologists, structural and hydraulic engineers, etc., interested in both research and practical problems regarding volcanic rocks and soils.

The Workshop is divided in the following five sessions:

- Structural features of volcanic materials
- Mechanical behaviour of volcanic rocks
- Mechanical behaviour of volcanic soils
- Geotechnical aspects of natural hazards
- Geotechnical problems of engineering structures

Each session is opened by a Keynote Lecture, delivered by an internationally recognised expert, followed by the presentation of selected contributions and an open discussion. A Special Lecture is dedicated to pyroclastic soils from the Campania region.

The technical visits to the island of Ischia and to the Phlegraean Fields, which for this kind of event are as important as the scientific sessions, will include several sites of both archaeological, natural and technical interest.

As the Chairman of the Organising Committee, I would like to thank all the members of the Organising and Scientific Committees, and particularly the Editors of the Proceedings.

Stefano Aversa

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