

# Preface

The study of the mechanical behaviour of granular materials as model soils is central to Soil Mechanics. However, granular materials have become of interest for a wide range of researchers, coming from different fields. These are not only engineers (civil, chemical, etc), but also geologists, granular physicists and applied mathematicians, to name a few.

The research efforts are focusing on understanding the complex mechanical behaviour of granular materials. The scientific approaches are ranging from purely phenomenological, that use continuum concepts to micro-mechanical that relay more and more computer simulation discrete simulations. All this spurns an increasing interest in the scientific community to bring together results and different points of view. In various countries joint research networks are already active, and an EU-supported Research and Training Network has recently started<sup>1</sup> (October 2002). Several conferences, symposia and workshops have been recently organised in the line traced by the pioneering "Powders & Grains" conferences.

The Alert Board of Directors decided to devote one session of the 2001 Alert workshop to "Mechanics and physics of granular materials". We were given the responsibility to take care of the scientific organisation of this session, and we decided to invite researchers from the community of physicians and engineers with the aim of exposing us to each other viewpoints and current activities.

In view of this special issue of the Rivista Italiana di Geotecnica, with the approval of the Editor in Chief, we asked the authors to present with more detail their work, in order to have, as far as possible, a representative picture of the current research activities in the field of granular materials. Thank-you warmly to the Editor in Chief of the Italian Geotechnical Journal, Roberto Nova, and to all the authors for their contributions.

*The Guest Editors*  
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<sup>1</sup> DIGA (Degradation and Instabilities in Geomaterials with Application to Hazard Mitigation)  
<http://diga.mechan.ntua.gr/index.html>.