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Nota di contenuto	Front Cover; Table of contents; Preface; Organization committees; Acknowledgements; Sponsors; Keynotes lectures; Interactions between atmosphere and geosphere-difficulties in measuring evaporation; Interpretation of soil-water characteristic curves when volume change occurs as soil suction is changed; Ventilation effects in an argillaceous rock tunnel examined via unsaturated soil mechanics; Compacted soils: From physics to hydraulic and mechanical behaviour; Rockfill mechanics; Unsaturated soil mechanics in the design and performance of pavements Estimation of the 1-D heave of a natural expansive soil deposit with a light structure using the modulus of elasticity based methodAdvances in testing techniques; Physical modelling of the effect of partial saturation on the stability of geocell walls; Calibration in the laboratory of capacitance sensors for water content monitoring; Unsaturated soil response under plane strain conditions via true triaxial testing; Measuring water retention properties of a series of bentonite clays in a

wide range of suctions; Physical modeling of the mechanical improvement of unsaturated silt through heating
Triaxial cell for nonisothermal shear strength of compacted silt under high suction magnitudes
Measurement of friction on piles over neutral plane in expansive soils; On the use of unsaturated properties of a sandy material for centrifuge model preparation; Application of electrical resistivity for the control of water content and density in loess; A method for making a homogeneous specimen of unsaturated clay using micro-wave; Centrifuge modelling of wetting-induced collapse in embankment base; A practical method for suction estimation in unsaturated soil testing
Preparing unsaturated samples of decomposed granite for laboratory controlled CPTs
Estimating soil hydraulic parameters from capillary rise tests; Geophysical investigation of cracking in unsaturated soils; Unsaturated soil behavior: Water retention behavior and hydraulic properties; Preferential flow and mass transport modeling in a heterogeneous unsaturated soil; Influence of cracks on soil water characteristic curve; Influence of suction on the permeability of unsaturated soils; Evaluation of the suction calibration curves for Whatman 42 filter paper
Soil water characteristic curves of lime-treated highly expansive soils
Water retention properties of a demolition waste; Water infiltration in final cover layer of landfills in northeast region of Brazil; Water retention properties of a residual soil from Caracas; Air permeability of cover soil from the Bandeirantes landfill in S@o Paulo, Brazil; Water retention curves for a tropical soil contaminated by vinasse; Permeability studies with blend of fly Ash and Rice Husk Ash stabilized soil subgrade; Capillary rise in pores with rough walls; Volumetric and elastic behavior
Multi-dimensional swelling behavior of Al-Qatif expansive soils

Sommario/riassunto

New theories and testing techniques related with Unsaturated Soil Mechanics have proven to be valuable tools to study a broad spectrum of geo-materials which includes rocks, rock fills, frozen soils and domiciliary solid wastes. These new theories and testing techniques have permitted the analysis of several traditional problems from a new perspective (e.g., swelling or collapsible soils and compacted soils or pavements materials), and they have also shown their efficiency to study new energy-related problems like CO₂ sequestration and nuclear waste disposal. Advances in Unsaturated Soils is a
