

1. Record Nr.	UNINA9910822897303321
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Titolo	Hillslope hydrology and stability // Ning Lu, Jonathan W. Godt [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2013
ISBN	1-139-61055-4 1-107-23571-5 1-139-61241-7 1-139-62171-8 1-283-94319-0 1-139-62543-8 1-139-60889-4 1-139-10816-6 1-139-61613-7
Descrizione fisica	1 online resource (xxiv, 437 pages) : digital, PDF file(s)
Disciplina	551.43/6
Soggetti	Mountain hydrology Slopes (Physical geography) Soil erosion Soil mechanics Landslides Groundwater flow
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	pt. I. Introduction and state of the art -- pt. II. Hillslope hydrology -- pt. III. Total and effective stress in hillslopes -- pt. IV. Hillslope material properties -- pt. V. Hillslope stability.
Sommario/riassunto	Landslides are caused by a failure of the mechanical balance within hillslopes. This balance is governed by two coupled physical processes: hydrological or subsurface flow and stress. The stabilizing strength of hillslope materials depends on effective stress, which is diminished by rainfall. This book presents a cutting-edge quantitative approach to understanding hydro-mechanical processes across variably saturated

hillslope environments and to the study and prediction of rainfall-induced landslides. Topics covered include historic synthesis of hillslope geomorphology and hydrology, total and effective stress distributions, critical reviews of shear strength of hillslope materials and different bases for stability analysis. Exercises and homework problems are provided for students to engage with the theory in practice. This is an invaluable resource for graduate students and researchers in hydrology, geomorphology, engineering geology, geotechnical engineering and geomechanics and for professionals in the fields of civil and environmental engineering and natural hazard analysis.

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