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Titolo	Shallow Geophysical Mass Flows down Arbitrary Topography : Model Equations in Topography-fitted Coordinates, Numerical Simulation and Back-calculations of Disastrous Events // by Ioana Luca, Yih-Chin Tai, Chih-Yu Kuo
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Descrizione fisica	1 online resource (286 p.)
Collana	Advances in Geophysical and Environmental Mechanics and Mathematics, , 1866-8348
Disciplina	363.34
Soggetti	Geology Geology—Statistical methods Natural disasters Engineering geology Engineering—Geology Foundations Hydraulics Quantitative Geology Natural Hazards Geoengineering, Foundations, Hydraulics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Topography-fitted coordinate system -- An alternative of topography-fitted coordinates — unified coordinate system -- Entrainment and deposition at the basal surface -- Continuum mechanical models in a topography-fitted coordinate system -- Numerical examples and experimental validation -- Back-calculation of natural disaster events.
Sommario/riassunto	Geophysical mass flows, such as landslides, avalanches or debris flows, are frequent mass movement processes in mountain areas and often cause disastrous damage. This book lays a foundation for formulating the depth-averaged equations describing the shallow geophysical mass

flows over non-trivial topography. It consists of the detailed derivation of the model equations. The stimulating numerical examples demonstrate how the proposed models are applied. All this make this book accessible to a wide variety of readers, especially senior undergraduate and graduate students of fluid mechanics, civil engineering, applied mathematics, engineering geology, geophysics or engineers who are responsible for hazard management.
