



dandelion.com

PROCEEDINGS OF THE EIGHTH INTERNATIONAL CONFERENCE AND
FIELD TRIP ON LANDSLIDES/GRANADA/SPAIN/27-28 SEPTEMBER 1996

may be used for personal purposes only or by libraries associated to dandelion.com network.

Landslides

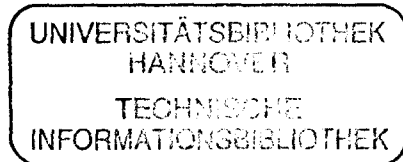
Edited by

JOSÉ CHACÓN & CLEMENTE IRIGARAY

University of Granada, Spain

TOMÁS FERNÁNDEZ

University of Jaén, Spain



A.A. BALKEMA / ROTTERDAM / BROOKFIELD / 1996

Table of contents

Founders of the International Conference and Fieldtrip on Landslides (ICFL)	IX
Preface	XI
Organization	XIII
<i>Introduction</i>	
History of the International Conference and Field Trip on Landslides (ICFL) <i>E. E. Brabb</i>	3
<i>Landslides description, terminology, classification, inventory and mapping</i>	
Landslides inventory and determining factors in the Albuñuelas river basin (Granada, Spain) <i>R. El Hamdouni, C. Irigaray, J. Chacón & T. Fernández</i>	21
The Calhandriz landslide (Metropolitan area of Lisbon) <i>A. B. Ferreira, J. L. Zêzere & M. L. Rodrigues</i>	31
Changes to the landscape – Landslides and gullies <i>C. Fredén</i>	39
World mudflow phenomena <i>V. F. Perov</i>	47
The 25 most catastrophic landslides of the 20th century <i>R. L. Schuster</i>	53
Landslide hazard in Indian Himalaya and Canadian Rockies: A comparative analysis <i>R. B. Singh & B. W. Pandey</i>	63
Results and problems of cadastral survey of slides in Hungary <i>J. Szabó</i>	71

The destruction of the Skalka Monastery as a result of deep-seated deformations <i>J.Vlčko, P.Wagner & R.Míka</i>	79
 <i>Landsliding causes: Determining and triggering factors</i>	
Structure and hydrology in controlling mass failure in space and time: The case of the Guadalfeo failures <i>I.Alcántara-Ayala & J.B.Thornes</i>	89
Rainfall induced deformations of road embankments <i>E.E.Alonso, A.Lloret & E.Romero</i>	97
Modelling debris flows on gradually varying slopes: An application to Moscardo Torrent (Paluzza, Friuli Venezia Giulia, Italy) data <i>M.Arattano & A.Deganutti</i>	109
Landslides in urban areas: The triggering factors in the historical city, Ouro Preto, Brazil <i>T.Bonuccelli, M.L. de Souza & L.V.Zuquette</i>	117
Historical landslides in the Eastern Pyrenees and their relation to rainy events <i>J.Corominas & J.Moya</i>	125
Stability of rock slopes with discontinuous planes <i>M.Enoki</i>	133
G.I.S. analysis and mapping of landslides determinant factors in the Contraviesia area (Granada, Southern Spain) <i>T.Fernández, C.Irigaray & J.Chacón</i>	141
Geological structure and movement of landslide slopes from the viewpoint of slope evolution processes <i>D.Higaki & K.Yoshida</i>	153
Methodology for the analysis of landslide determinant factors by means of a GIS: Application to the Colmenar area (Malaga, Spain) <i>C.Irigaray, J.Chacón & T.Fernández</i>	163
GIS-supported analysis of effects of joint systems on shallow landslides in a tectonically complex crystalline catchment area (Glein Valley, Austria) <i>H.Proske</i>	173
A steep wall with toppling rockpillars on a clayey subsoil <i>J.Rohn, K.Czurda, J.Zvelebil & P.Zika</i>	181
Pittsburgh red beds cause renewed landsliding after a ca. 310 Ma pause, Allegheny County, Pennsylvania, USA <i>Ch. H.Shultz & J.A.Harper</i>	189

The prediction of rainfall-triggered soil slips in Manizales (Colombia) <i>M.T.J.Terlien</i>	197
 <i>Slope stability and failure analysis: Treatment and control</i>	
The study on investigation and preventing technics of the slope land development and the slope stability <i>H.H.Chen, W.Y.Yang & Y.R.Rai</i>	209
Creep model of Kanto loam and its application to time prediction of landslide <i>T.Fukuzono</i>	221
Failure propagation process in landslide movement-monitoring and stability analysis of the Sodechi landslide, Japan <i>T.Kamai & T.Tokue</i>	235
Landslide structure and control works at Nishitani landslide, Wakayama Prefecture, Japan <i>N.Oyagi, H.Makino & S.Mori</i>	247
The SMR geomechanical classification for slopes: A critical ten-years review <i>M.Romana</i>	255
On slip surface depth estimation, O'dokoro area, Niigata, Japan <i>K.Sasaki, M.Ozaki & H.Marui</i>	269
Effects of horizontal borehole construction in landslide region <i>H.Shuzui</i>	285
Unstable cut slopes at the Oviedo (Spain) highway ring: Analyses and solutions <i>A.O.Uriel, L.Ortuño, M.A.Oliveros, J.P.Feijoo & M.Arroyo</i>	299
A case study on failure of cut slope consisting of weathered serpentine <i>N.Yagi, R.Yatabe, K.Yokota & M.Mukaitani</i>	307
 <i>Landslide distribution, susceptibility hazard and risk mapping and assessment</i>	
Landslides climatic susceptibility map of Spain <i>M.Ferrer & F.Ayala</i>	323
From the inventory to the risk analysis: Improvements to a large scale GIS method <i>J.Chacón, C.Irigaray, R.El Hamdouni & T.Fernández</i>	335
Preparation and validation of digital maps of geology and slope instability <i>P.N.Flentje & R.N.Chowdhury</i>	343

Use of airborne multispectral imagery for mapping landslides in Los Vélez district, south-eastern Spain <i>J. Hervás, P.L. Rosin, A. Fernández-Renau, J.A. Gómez & C. León</i>	353
An analysis of the transition of the distribution of the shallow slides in use of the fractal dimension and the Weibull distribution function <i>H. Hiura & H. Fukuoka</i>	363
Comparative analysis of methods for landslide susceptibility mapping <i>C. Irigaray, J. Chacón & T. Fernández</i>	373
Study on the fractal dimensions and geological condition of landslides <i>T. Kubota</i>	385
Author index	393