

An informal workshop on Slow movements: monitoring and modelling

A previous issue of the *Rivista Italiana di Geotecnica* (n.2/1997) was devoted to the first session of the two-days informal workshop on *Slow Slope Movements: monitoring and modelling* promoted by the *Club des Lents* and held on April, 1996, at the École Polytechnique Fédérale de Lausanne (EPFL). The *Club des lents* is a small spontaneous association of researchers interested in the study of slow landslides. It periodically promotes meetings on slow slope movements: the first one was held in Vaulx-en-Velin (Lyon), organized by the École Nationale des Travaux Publics de l'État (ENTPE), the second one in Lausanne, the third one on May, 1997, in Capri, organized by the Seconda Università di Napoli.

Fifty people, coming from Switzerland, France, Italy, Spain and Canada, attended the workshop, whose subject was *Evaluation of factors controlling slow slope movements*. Two sessions were devoted to the following themes:

1. *Evaluation by monitoring*
2. *Evaluation by numerical analyses and statistical methods*

A third special session concerned :

Comparison of different approaches used to model the movements of the Sallèles embankment

The workshop was concluded by a general discussion involving a large number of participants.

This issue reports all available contributions of the Session n. 2.

List of contributions presented at the workshop

Session 1: *Evaluation by monitoring*
Chairman: Christophe Bonnard

Contributions

- Ch. Bonnard, G. Steinmann, *A new laser distancemeter for continuous measurement of displacements*
G. Follacci, *Topographic measurements on La Clapière landslide*
J.C. Gress, *Investigation on groundwater flows in slopes*
G. Lanzo, B. D'Elia, *Experiences on slope movements in clayey soils*
A. Lembo Fazio, R. Ribacchi, M. Sciotti, *Slow movements of high mountain slopes and their influence on engineering structures*
L. Picarelli, *Researches on slow movements carried out at the Universities of Naples*
R. Ribacchi, R. Sciotti, P. Tommasi, *Slow movements along the slip surface of an old landslide in the clayey slope of the Orvieto Hill*

Session 2. *Evaluation by numerical analyses and statistical methods*
Chairman: Renato Ribacchi

- E. Alonso, A. Lloret, E. Romero, *Rainfall induced deformations of road embankments*
D. Chan, *Analysis and case histories of time-dependent movements of soils*

- E. Chiriotti, *Deep seated gravitational slope deformations: monitoring and modelling*
E. Flavigny, *Stresses in piles built in moving slopes*
P. Jolly, C.H. Lamarque, H. Evrard, R. M. Faure, *Forecasting slope movements using identification of a hydro-geological model: the case of Sechilienne*
A. Mandolini, G. Urciuoli: *Prediction of slope movements by means of statistical analysis of collected data*
F. Mayoraz, T. Cornu, L. Vuillet, *Neural networks for the prediction of slope movements*
C. Russo, G. Urciuoli, *The role of pore pressure fluctuations on slope movements*
K. Sassi, J.P. Magnan, *Finite element kinematic limit analysis of Sallèdes trial embankment A*
G. Scarpelli, *Experiences on slow slope movements along the Adriatic coast*
J.F. Serratrice: *MNT approach to study landslide deformations*
G. Sève, J.P. Magnan, *Evaluation of horizontal stress in a landslide*
L. M. Spinazzé, R. Bruschi, G. Giusti, *Soil-pipe interaction for pipelines crossing areas affected by soil movements*
L. Vuillet: *Modelling creeping slopes*

Special Session, *Comparison of different approaches used to model the movements of the Sallèdes embankment.*

Chairman: Pierre Pouget

- J-C. Cholley, *Analysis of slope displacements induced by the Sallèdes embankment*
P. Pouget, *Analysis of movements of Sallèdes embankment*
C. Russo, *Numerical interpretation of movements of the embankment B, Sallèdes*

Luciano Picarelli

Un incontro informale su Movimenti lenti di versante: monitoraggio e modellazione

Il numero n. 2/97 della Rivista Italiana di Geotecnica fu dedicato alla prima sessione del Seminario informale di due giorni *Movimenti lenti di versante: monitoraggio e modellazione*, promosso dal *Club des Lents* e tenutosi nell'Aprile 1996 presso l'École Polytechnique Fédérale de Lausanne (EPFL). Il *Club des lents* è una piccola associazione spontanea di ricercatori impegnati nello studio dei movimenti franosi lenti. Il club periodicamente organizza incontri sui movimenti lenti di versante: il primo fu tenuto a Vaulx-en-Velin (Lione), organizzato dall'École Nationale des Travaux Publics de l'État (ENTPE), il secondo a Losanna, il terzo nel Maggio 1997, a Capri, organizzato dalla Seconda Università di Napoli.

Circa cinquanta persone, provenienti da Svizzera, Francia, Italia, Spagna e Canada, parteciparono al seminario, il cui tema era *Valutazione dei fattori che controllano i movimenti lenti di versante*. Due sessioni furono dedicate ai seguenti argomenti:

1. *Valutazione in base ai dati del monitoraggio*
2. *Valutazione in base ad analisi numeriche e metodi statistici*

Una terza sessione speciale riguardò:

Paragone di differenti approcci usati per modellare i movimenti del rilevato di Sallèdes

Il seminario si concluse con una discussione generale che coinvolse un gran numero di partecipanti.

Questo numero pubblica tutti i contributi disponibili relativi alla Sessione n. 2.

Luciano Picarelli