SLOPE STABILITY 2000

SPONSORED BY
The Geo-Institute of the American Society of Civil Engineers

August 5-8, 2000
Denver, Colorado

EDITED BY
D.V. Griffiths
Gordon A. Fenton
Timothy R. Martin

SUB Göttingen
213 649 128
2001 A 19779
## Contents

- Rapid Reactivation of a Large Composite Earth Slide–Earth Flow ................................................. 1  
  Scott A. Anderson, T. Samuel Holder, and Gene Dodd

- Importance of Three-Dimensional Slope Stability Analyses in Practice ....................................... 18  
  David Arellano and Timothy D. Stark

- A Numerical Technique for Two-Dimensional Slope Stability Problems ......................................... 33  
  Mohsen Beikae

- Stability Assessment of an Old Domestic Waste Slope in Warsaw (Poland)......................................... 48  
  Abdelmalek Bouazza and Michel Wojnarowicz

- Important Factors to Consider in Properly Evaluating the Stability of Rock Slopes ......................... 58  
  Douglas D. Boyer and Keith A. Ferguson

- Bayesian Calibration of Slope Failure Probability ........................................................................... 72  
  Raymond W.M. Cheung and Wilson H. Tang

- A Model of Stability of Slopes ........................................................................................................... 86  
  N.D. Cristescu

- Geotechnical Stability Analysis by Strength Reduction ...................................................................... 99  
  Ethan Dawson, Farid Motamed, Saddanathapillai Nesarajah, and Wolfgang Roth

- Shear Strength of Sensitive Clay Slopes in Maine ............................................................................. 114  
  Steven C. Devin and Thomas C. Sandford

- Effects of Sinkholes on Earth Dams .................................................................................................. 129  
  Mandar M. Dewoolkar, Kitidech Santichaianant, Hon-Yim Ko, and Ton Goddery

- Stabilization of a Slide Using a Tieback Pile Wall ........................................................................... 142  
  Vishnu Diyaljee, Murthy Pariti, and Roy Callioux

- Stabilization of Meikle River Slide on Highway 35 ........................................................................... 154  
  Vishnu Diyaljee, Murthy Pariti, and Roy Callioux

- Numerical Analysis as a Practical Design Tool in Geo-Engineering ................................................ 169  
  Charles Fairhurst, Branko Damjanac, and Roger Hart

- Influence of Soil Strength Spatial Variability on the Stability of an Undrained Clay Slope by Finite Elements .......................................................... 184  
  D.V. Griffiths and Gordon A. Fenton

- Effect of Deterministic and Probabilistic Models on Slope Reliability Index ....................................... 194  
  Ahmed M. Hassan and Thomas F. Wolff

- Shear Strength Evaluation of Clay–Rock Mixtures ............................................................................ 209  
  Anthony T. Iannacchione and Luis E. Vallejo

- Finite Element Methods for Three-Dimensional Slope Stability Analysis ......................................... 224  
  Boris Jeremić
Slope Stability Calculations Using Limit Analysis...................................................... Jyant Kumar
Analysis of the Progression of Failure of Earth Slopes by Finite Elements............. J.B. Lechman and D.V. Griffiths
Liquefaction and Dam Failures................................................................................. B. Muhunthan and A.N. Schofield
Analysis of a Failed Embankment on Peaty Ground............................................ A. Porbaha, H. Hanzawa, and T. Kishida
Sea-Cliff Erosion at Pacifica, California, Caused by 1997–98 El Niño Storms..... Charles B. Snell, Kenneth R. Lajoie, and Edmund W. Medley
Monitoring the Long Term Stability of the Fresh Kills Landfill in New York City... Thomas G. Thomann, Majed A. Khoury, Aaron D. Goldberg, and Richard A. Napolitano
Residual Shear Strengths of Bentonites on Palos Verdes Peninsula, California..... Stephen M. Watry and Poul V. Lade
A Limit Equilibrium Stability Analysis of Slopes with Stabilizing Piles................ Takuo Yamagami, Jing-Cai Jiang, and Katsutoshi Ueno
Parametric Study and Subsurface Exploration Plan for Bluestone Dam............... Greg Yankey, Rick Deschamps, Michael McCray, and David J. Bentler
Subject Index........................................................................................................ 373
Author Index........................................................................................................ 375