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GEOTECHNICAL SLOPE ANALYSIS

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With contributions by:

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GEOTECHNICAL SLOPE ANALYSIS is an extended and revised edition of the original *Slope Analysis* (Chowdhury, Elsevier, 1978). This reference volume provides a critical and balanced overview of the developments over the last three decades, related to understanding, modelling and assessment of the engineering performance of slopes. New chapters are devoted to seismic effects, to probabilistic approaches and reliability analysis and to a regional case study concerning urban slope stability. The principles of both deterministic and probabilistic analysis are illustrated by the inclusion of numerical examples. Frequent reference is made to important case histories. The increasing frequency and adverse impacts of natural and man-made hazards, such as landslides, are highlighted. There is also a brief introduction to concepts and methods for assessing landslide susceptibility, hazard and risk. Moreover, attention is drawn to the relevance of geotechnical analysis of slopes in the context of challenges that might be posed by potential climate change scenarios. The author advocates a multi-disciplinary approach for carrying out site-specific slope assessment within the proper context of a regional study. Modern observational approaches, including methods and techniques for real-time monitoring of slope performance, are also emphasized. The unique perspective and philosophy of this book will benefit researchers, consultants, practitioners and senior students in civil, mining and geological engineering in their professional practice and education.

GEOTECHNICAL SLOPE ANALYSIS

Robin Chowdhury; with contributions by Phil Flentje and Gautam Bhattacharya

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Dr. Robin Chowdhury (University of Wollongong, Australia) is an international expert on slope engineering. He has devoted more than three decades to teaching, research and scholarship. He has emphasized the integration of regional slope studies with site-specific slope engineering assessments. He has also advocated the adoption of an interdisciplinary approach for geotechnical engineering projects, in particular for landslide management.

Other contributors:

Dr. Phil Flentje (University of Wollongong, Australia) is an expert in the development of methods to assess landslide hazard and to monitor parameters such as slope deformations, pore pressures and associated structural displacements, as part of the landslide activity and frequency.

Dr. Gautam Bhattacharya (Bengal Engineering And Science University, Shibpur, India) is specialized in the development and application of numerical models in slope analysis under different conditions. He is currently the Vice Chairman, Calcutta Chapter of the Indian Geotechnical Society.

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