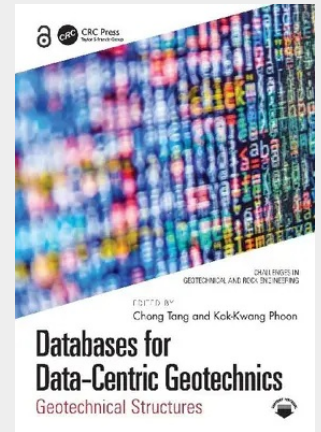


Databases for Data-Centric Geotechnics

Geotechnical Structures

Databases for Data-Centric Geotechnics forms a definitive reference and guide to databases in geotechnical and rock engineering, to enhance decision-making in geotechnical practice using data-driven methods. This second volume pertains to geotechnical structures. The opening chapter presents a substantial survey of performance databases and the effectiveness of our prediction models in matching the field measurements in these databases, based on (1) full-scale field tests, (2) 39 prediction exercises organized as a part of international conferences, and (3) comparison between numerical analyses and in-situ or field measurements conducted by the French LCPC. The focus is on the evaluation of the statistical degree of confidence in predicting various of quantities of interest such as capacity and deformation. The following 18 chapters then present databases on the performance of shallow foundations, spudcan foundations, deep foundations, anchors and pipelines, retaining systems and excavations, and landslides. The databases were compiled from studies undertaken in many countries such as Australia, Belgium, Bolivia, Brazil, Canada, China, Egypt, France, Germany, Hungary, Iran, Ireland, Japan, Kenya, Malaysia, Netherlands, Norway, Poland, Portugal, South Africa, the United Kingdom and the United States. This volume on geotechnical structures is a companion to the volume on site characterization. Databases for Data-Centric Geotechnics represents the most diverse and comprehensive assembly of database research in a single publication (consisting of two volumes) to date. It follows from Model Uncertainties for Foundation Design, also published by CRC Press, and suits specialist geotechnical engineers, researchers and graduate students. Chapter 10 of this book is freely available as a downloadable Open Access PDF at <http://www.taylorfrancis.com> under a Creative Commons [Attribution (CC BY)] 4.0 license.

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