Finite Element Analysis in Geotechnical Engineering

Theory

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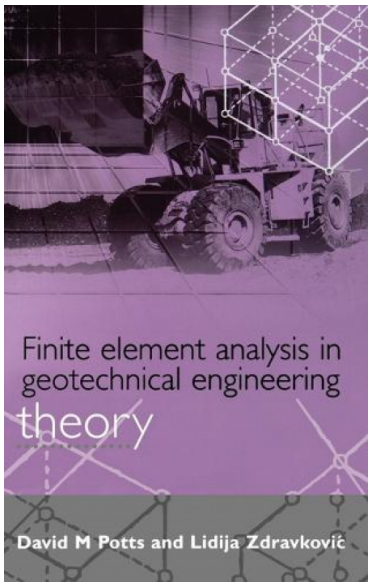

About the Book

This comprehensive new two-volume work provides the reader with a detailed insight into the use of the finite element method in geotechnical engineering. As specialist knowledge required to perform geotechnical finite element analysis is not normally part of a single engineering degree course, this lucid work will prove invaluable. It brings together essential information presented in a manner understandable to most engineers.

Volume 1 presents the theory, assumptions and approximations involved in finite element analysis while Volume 2 concentrates on its practical applications to real geotechnical problems. The theory explored in the first volume is referred to in the case studies of the second volume to provide a holistic impression of finite element analysis as it is applied in geotechncial engineering. Using practical examples, the second volume illustrates the restrictions, pitfalls, advantages and disadvantages of numerical analysis. The authors examine popular constitutive models, numerical techniques and case studies.

Together, both volumes aim to provide the reader with sufficient knowledge to judge the credibility of the numerical results that the reader may obtain, or review, in the future. Finite element analysis in geotechnical engineering: theory and application will be essential reading for practising geotechnical and structural engineers and researchers, particularly users of commercial finite element software, both in industry and in academia. Students performing project work at undergraduate and postgraduate level will also find this book invaluable.

Format: Hardback
Pagination: 500
Price:
£135.50 $203.00 €156.00
Publication Date:9th Apr 1999
ISBN: 9780727727534