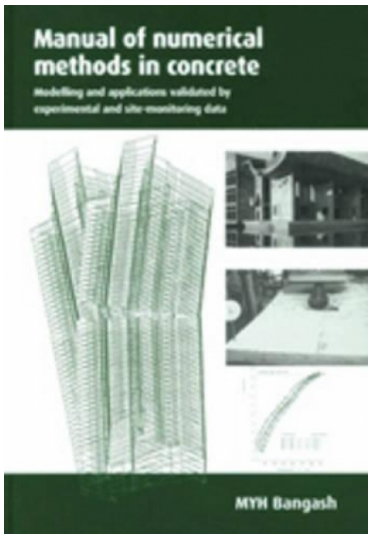
Manual of Numerical Methods in Concrete

Modelling and applications validated by experimental and site-monitoring data

M Y H Bangash



About the Book

The modelling of constitutive equations to represent the isotropic and anisotropic behaviour of concrete in structures remains one of the most difficult tasks in structural engineering. At present, analyses on concrete structures are carried out for elastic, plastic and cracking conditions under static and dynamic and blast loads. The behaviour of concrete under complex loads cannot easily be assessed by codes of practice or by simplified empirical formulae.

Manual of Numerical Methods in Concrete presents a unified approach for the available mathematical models of concrete, linking them to finite element analysis and to computer programs in which special provisions are made for concrete plasticity, cracking and crushing with and without concrete aggregate interlocking. Creep, temperature, and shrinkage formulations are included and geared to various concrete constitutive models. Their influence is taken into consideration in the operational and overloading behaviour of concrete structures, using linear and non-linear methods of analysis. Static and dynamic impactive and blast loadings are simulated in the interactive formulation.

The book also contains extensive appendices with supporting data and computer subroutines. *Manual of Numerical Methods in Concrete* is an essential reference work for engineers, technologists, designers and research students - all those involved with concrete structures.

Format: Hardback
Pagination: 944
Price:
£245.00 $344.00 €282.00
Publication Date:
27th Jul 2001
ISBN: 9780727729460

Enjoy 30% off this ebook with code **EME30** on ebooks.com or off the print book when placing an order via booksales@emerald.com and quoting the code **EME30**.