## DESCRIPTION

Fourteen years on from its last edition, *Cable Supported Bridges: Concept and Design, Third Edition*, has been significantly updated with new material and brand new imagery throughout. Since the appearance of the second edition, the focus on the dynamic response of cable supported bridges has increased, and this development is recognised with two new chapters, covering bridge aerodynamics and other dynamic topics such as pedestrian-induced vibrations and bridge monitoring.

This book concentrates on the synthesis of cable supported bridges, suspension as well as cable stayed, covering both design and construction aspects. The emphasis is on the conceptual design phase where the main features of the bridge will be determined. Based on comparative analyses with relatively simple mathematical expressions, the different structural forms are quantified and preliminary optimization demonstrated. This provides a first estimate on dimensions of the main load carrying elements to give in an initial input for mathematical computer models used in the detailed design phase.

Key features:

- Describes evolution and trends within the design and construction of cable supported bridges
- Describes the response of structures to dynamic actions that have attracted growing attention in recent years
- Highlights features of the different structural components and their interaction in the entire structural system
- Presents simple mathematical expressions to give a first estimate on dimensions of the load carrying elements to be used in an initial computer input
This comprehensive coverage of the design and construction of cable supported bridges provides an invaluable, tried and tested resource for academics and engineers.

 ABOUT THE AUTHOR

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Professor Gimsing is Professor Emeritus in the Department of Civil Engineering at the Technical University of Denmark and a Consulting Bridge Engineer. He consulted on the design for numerous landmark bridges including the Femern Bridge, third bridge across the Firth of Forth in Scotland, the Messina Strait Bridge and the 47km long motorway bridge across the Gulf of Thailand, and was a Finalist in the Millennium Bridge Competition for a pedestrian bridge across the Thames at St. Paul's Cathedral. He has won numerous design, teaching and research awards for his work within the structural engineering community and is the author of Cable Supported Bridges 2e (Wiley, 1997) and co-author of The Messina Strait Bridge (CRC, 2009).

Dr. Christos Georgakis is Associate Professor in Structural Engineering and Prof Gimsing's teaching successor at DTU. He has particular experience in relation to dynamic actions from his work at the Wind Tunnel Laboratory in Copenhagen and is also involved in several research projects dealing with the dynamics of slender bridges such as the Millennium Bridge in London.

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