



Second Edition

# HOW STRUCTURES WORK

Design and Behaviour  
from Bridges to Buildings

**David Yeomans**

**WILEY** Blackwell

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# HOW STRUCTURES WORK

Design and Behaviour from Bridges to Buildings, *Second Edition*

**David Yeomans**

Structural engineering is central to the design of a building. How the building behaves when subjected to various forces – the weight of the materials used to build it, the weight of the occupants or the traffic it carries, the force of the wind, etc. – is fundamental to its stability. The alliance between architecture and structural engineering is therefore critical to the successful design and completion of the buildings and infrastructure that surrounds us. Yet structure is often cloaked in mathematics, which many architects and surveyors find difficult to understand.

*How Structures Work* has been written to explain the behaviour of structures in a clear way without resorting to complex mathematics. This new edition includes a new chapter on construction materials and significant revisions to and reordering of the existing chapters. It is aimed at all who require a good qualitative understanding of structures and their behaviour and as such will be of benefit to students of architecture, architectural history, building surveying and civil engineering. The straightforward, nonmathematical approach ensures it will also be suitable for a wider audience including building administrators, archaeologists and the interested layman.

## Reviews of the first edition

*"How Structures Work is the most compelling on structures that I have ever read. And I have read a lot of books on structures."*

—R. L. Brungraber, Ph.D., P.E.

Timber Framing: Journal of the Timber Framers Guild, December 2009

*"The author writes beautifully. It is a user-friendly engaging book to read and one that is very easy to understand. One learns a lot by reading it.... I think it should be a compulsory text for all first year engineering students."*

—From a review of the first edition commissioned by the publisher

## About the Author

David Yeomans is an engineer, historian and teacher. He has taught in several schools of architecture in the United Kingdom and the United States, has been a consultant on World Heritage Sites and has written widely on the history of building structures.

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