



# Form and Forces: Designing Efficient, Expressive Structures

*By Edward Allen, Waclaw Zalewski*

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**Form and Forces: Designing Efficient, Expressive Structures** By Edward Allen, Waclaw Zalewski

Here, in one volume, is all the architect needs to know to participate in the entire process of designing structures. Emphasizing bestselling author Edward Allen's graphical approach, the book enables you to quickly determine the desired form of a building or other structure and easily design it without the need for complex mathematics. This unique text teaches the whole process of structural design for architects, including selection of suitable materials, finding a suitable configuration, finding forces and size members, designing appropriate connections, and proposing a feasible method of erection. Chapters are centered on the design of a whole structure, from conception through construction planning.

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## **Form and Forces: Designing Efficient, Expressive Structures** By Edward Allen, Waclaw Zalewski **Bibliography**

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## **Editorial Review**

From the Back Cover

### **FINDING GOOD FORMS FOR STRUCTURES--A GRAPHICAL APPROACH**

In *Form and Forces*, bestselling authors Edward Allen and Wacław Zalewski offer a fresh, new approach to the study of structures for students and practitioners of architecture and structural engineering. Emphasizing graphics rather than mathematics and rote learning, *Form and Forces* teaches statics and strength of materials in the context of a set of projects that involve students in the entire process of designing elegant, long-span structures, from concept generation to detailing and planning for construction.

Readers engage in such projects as a hanging roof for a transportation terminal, a concrete shell roof for a basketball arena, a wood truss roof for a summer camp activities building, cantilevered concrete shells to cover a stadium grandstand, and other fascinating, real-world designs. As they pursue these projects, students learn each fundamental structural design technique as it is needed, in the context in which it is useful, making it easy to remember and employ the principles discussed, including:

- Statics
- Bending and buckling behavior
- Finding form and forces for long-span structures
- Beam and column formulas
- The choice and layout of framing systems

Supplemented by a companion Web site with step-by-step graphic statics tutorials, interactive learning tools, and a special-purpose graphic statics solver program, *Form and Forces* allows every architect and engineer to employ the almost magical power of graphical techniques for generating good form.

*Form and Forces* equips the reader with simple, powerful tools employed by the great structural designers of the past 150 years—from Eiffel, Gaudí, and Maillart, to Schlaich and Calatrava—so that even beginners can design entire structures that are elegant and exciting.

Companion Web site: [www.wiley.com/go/formandforces](http://www.wiley.com/go/formandforces)

#### About the Author

**EDWARD ALLEN** has taught for more than thirty years at the Massachusetts Institute of Technology, Yale University, and the University of Oregon. He is the bestselling author of *Fundamentals of Building Construction*, Fifth Edition.

**WACŁAW ZALEWSKI** is Professor Emeritus of Structural Design at the Massachusetts Institute of Technology.

## **Users Review**

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**Harold Smith:**

In this particular era which is the greater man or woman or who has ability in doing something more are more treasured than other. Do you want to become one among it? It is just simple way to have that. What you must do is just spending your time not much but quite enough to enjoy a look at some books. On the list of books in the top listing in your reading list will be Form and Forces: Designing Efficient, Expressive Structures. This book which can be qualified as The Hungry Hillside can get you closer in becoming precious person. By looking up and review this e-book you can get many advantages.

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