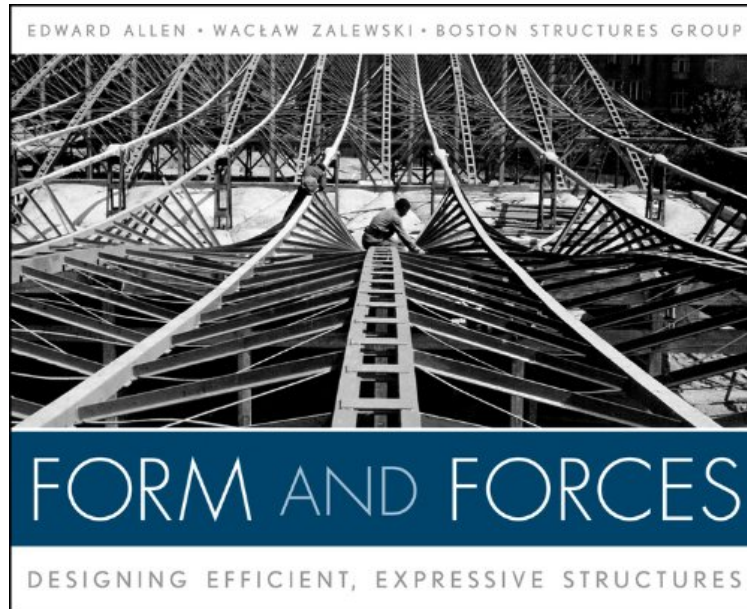


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Form and Forces: Designing Efficient, Expressive Structures

Edward Allen, Waclaw Zalewski

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9 of 9 people found the following review helpful. Structural engineering motherlode By R. MuttEd's review says it all but I thought I'd chime in here. I have spent a considerable amount of time and money researching books that would provide a comprehensive, creative, and intuitive education in structural engineering. Sadly most of the books I found were dry and virtually impossible to creatively apply, or very creative but devoid of any science. I was pretty much set on reading a handful of dry books (with my eyelids taped open if necessary) and supplementing it with a handful of creative books (with constant reference to the dry books) and hope that I could start seeing and thinking properly. One chapter into this book, plus a perusal of the other chapters, was all it took to clear my shelf and focus my efforts on learning from this book and its online companion materials. It has it all, and it explains it all in a way us non-textbook people can both understand and get excited about studying. Yeah that's right - this book will make you WANT to learn structural engineering. This book is for enterprising product designers, architects, or others interested in knowing how forces interact with structures and how creative thought can minimize effort and material while creating a structure that can withstand the forces applied to it. It is long and thorough so do not expect a light treatment. Buy with confidence and use for life. 4 of 4 people found the following review helpful. Intuitive, Visual, and Practical By Charles Heckel This book won't make you an architect or a structural engineer, but it opens a lot of doors. Good teaching approaches abstractions with specific problems, visual hands-on models of the intangibles involved, and clearly explained pragmatic solutions. From the first chapter--designing simple suspension bridges and calculating the loads with a visual representation called a force polygon--Allen takes you through a variety of forms, explaining simply and clearly the practical considerations underlying choice of materials and connectors as well as the structures within which they are used. An architect's choice of scissors trusses to support the roof of a church is analyzed and found wanting,

and replaced with (of all things) a simpler, less costly, and more effective tension structure using steel chain. The magnificent bubble-like dome over the courtyard of the British Museum is explained in terms of the structural efficiency which makes it so strong, though so light. No number crunching needed--by the end of the book, you should be able to design pretty good commonsense structures by doodling on a napkin. 0 of 0 people found the following review helpful. Five Stars By Ivy great book and has some wonderful pictures.

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.