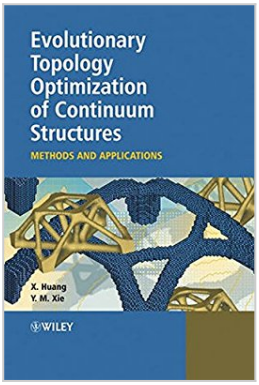

Evolutionary Topology Optimization of Continuum Structures: Methods and Applications

By Xiaodong Huang, Mike Xie

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Evolutionary Topology Optimization of Continuum Structures treads new ground with a comprehensive study on the techniques and applications of evolutionary structural optimization (ESO) and its later version bi-directional ESO (BESO) methods. Since the ESO method was first introduced by Xie and Steven in 1992 and the publication of their well-known book *Evolutionary Structural Optimization* in 1997, there have been significant improvements in the techniques as well as important practical applications. The authors present these developments, illustrated by numerous interesting and detailed examples. They clearly demonstrate that the evolutionary structural optimization method is an effective approach capable of solving a wide range of topology optimization problems, including structures with geometrical and material nonlinearities, energy absorbing devices, periodical structures, bridges and buildings.

- Presents latest developments and applications in this increasingly popular & maturing optimization approach for engineers and architects;
- Authored by leading researchers in the field who have been working in the area of ESO and BESO developments since their conception;
- Includes a number of test problems for students as well as a chapter of case studies that includes several recent practical projects in which the authors have been involved;
- Accompanied by a website housing ESO/BESO computer programs at http://www.wiley.com/go/huang and test examples, as well as a chapter within the book giving a description and step-by-step instruction on how to use the software package BESO2D.

Evolutionary Topology Optimization of Continuum Structures will appeal to researchers and graduate students working in structural design and optimization, and will also be of interest to civil and structural engineers, architects and mechanical engineers involved in creating innovative and efficient structures.

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Editorial Review

From the Back Cover
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