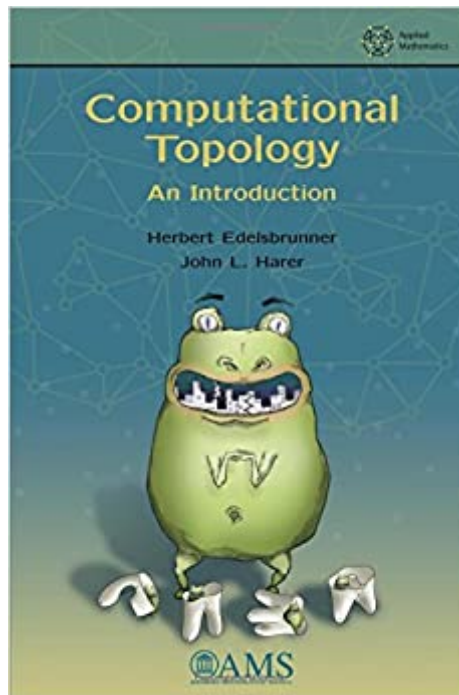




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# Computational Topology: An Introduction



## Synopsis

Combining concepts from topology and algorithms, this book delivers what its title promises: an introduction to the field of computational topology. Starting with motivating problems in both mathematics and computer science and building up from classic topics in geometric and algebraic topology, the third part of the text advances to persistent homology. This point of view is critically important in turning a mostly theoretical field of mathematics into one that is relevant to a multitude of disciplines in the sciences and engineering. The main approach is the discovery of topology through algorithms. The book is ideal for teaching a graduate or advanced undergraduate course in computational topology, as it develops all the background of both the mathematical and algorithmic aspects of the subject from first principles. Thus the text could serve equally well in a course taught in a mathematics department or computer science department.

## Book Information

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## Customer Reviews

This book is a very welcome, untraditional, thorough and well-organized introduction to a young and quickly developing discipline on the crossroads between mathematics, computer science, and engineering. --DMV Newsletter

A must have if you are new to the field of computational topology. It caters both to mathematicians and engineers. I would recommend it to all people interested.

This book is good for the topic, but if you are not familiar with topology to begin with, I would

recommend an additional text. This book's section on topology is terse.

Horrible. The English is a nightmare. Explanations are poor and notation sucks. If you want a good intro to topology (which is what half this book is) get anything out there, except for the Dover versions. And if you want the real deal in computational topology get a book in computational homology

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