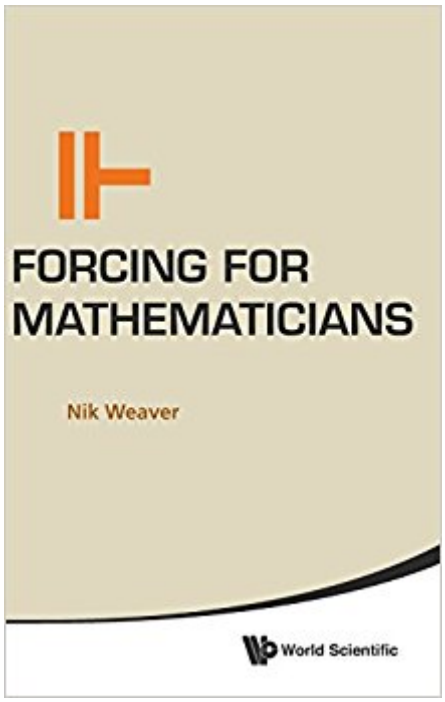
Forcing For Mathematicians



Synopsis

Ever since Paul Cohen’s spectacular use of the forcing concept to prove the independence of the continuum hypothesis from the standard axioms of set theory, forcing has been seen by the general mathematical community as a subject of great intrinsic interest but one that is technically so forbidding that it is only accessible to specialists. In the past decade, a series of remarkable solutions to long-standing problems in C*-algebra using set-theoretic methods, many achieved by the author and his collaborators, have generated new interest in this subject. This is the first book aimed at explaining forcing to general mathematicians. It simultaneously makes the subject broadly accessible by explaining it in a clear, simple manner, and surveys advanced applications of set theory to mainstream topics. Readership: Graduates and researchers in logic and set theory, general mathematical audience.

Book Information

Hardcover: 152 pages

Publisher: World Scientific Publishing Company (March 27, 2014)

Language: English

ISBN-10: 9814566004

ISBN-13: 978-9814566001

Product Dimensions: 6 x 0.4 x 9 inches

Shipping Weight: 14.4 ounces (View shipping rates and policies)

Average Customer Review: 5.0 out of 5 stars 1 customer review

Best Sellers Rank: #1,020,207 in Books (See Top 100 in Books) #111 inÃ Â Books > Science & Math > Mathematics > Pure Mathematics > Set Theory #497 inÃ Â Books > Science & Math > Mathematics > Pure Mathematics > Logic

Customer Reviews

Ever since Paul Cohen’s spectacular use of the forcing concept to prove the independence of the continuum hypothesis from the standard axioms of set theory, forcing has been seen by the general mathematical community as a subject of great intrinsic interest but one that is technically so forbidding that it is only accessible to specialists. In the past decade, a series of remarkable solutions to long-standing problems in C*-algebra using set-theoretic methods, many achieved by the author and his collaborators, have renewed interest in this subject. This is the first book aimed at explaining forcing to general mathematicians. It simultaneously makes the subject broadly accessible by explaining it in a clear, simple manner, and surveys advanced applications of set

theory to mainstream topics.

I wanted to understand the basic ideas of forcing without having to learn a great deal ofadvanced set theory and formal logic. A book suitable for self study that was narrowly focusedon forcing was hard to find but this is it. The first 11 chapters introduce ZFC, absoluteness, models, etc.and clearly explain p-names, forcing notion, genric ideals and the method of extending a model by forcing.The fundamental theorem of forcing is covered well. Chapters 12 and 13 give examples of forcing, the firstextending a hypothetical ZFC model to a larger model where CH is true, then chapter 13, using a different generic ideal,extends the same model to one where not CH is true. These first 13 chapters are worth the price of the book which isunfortunately high.The writing is very clear, but the concepts and proofs are not easy. If the material is found to be too difficult I recommen\dreading Paul Cohen’s book on Set Theory and the Contniuum Hypothesis for a lean introduction to logic and ZFC as well asCohen’s first application of forcing. Also, the web has some good material: the wikipedia article on forcing is good, and the referencesit has to online articles by Timothy Chow and Kenny Easwaran are very useful. There are other ways to develop forcingusing boolean algebra and filters instead of genric ideals; reading Chow and Easwaran is a good exercise for thinking about forcing in different ways.For the more advanced reader Weaver offers examples of using forcing in several chapters as well as more set theory topics.Chapter 17 on the Diamond Principle is especially interesting.There are defects in every book but none worth mentioning here. This is a great book.

Privacy

FAQ & Help