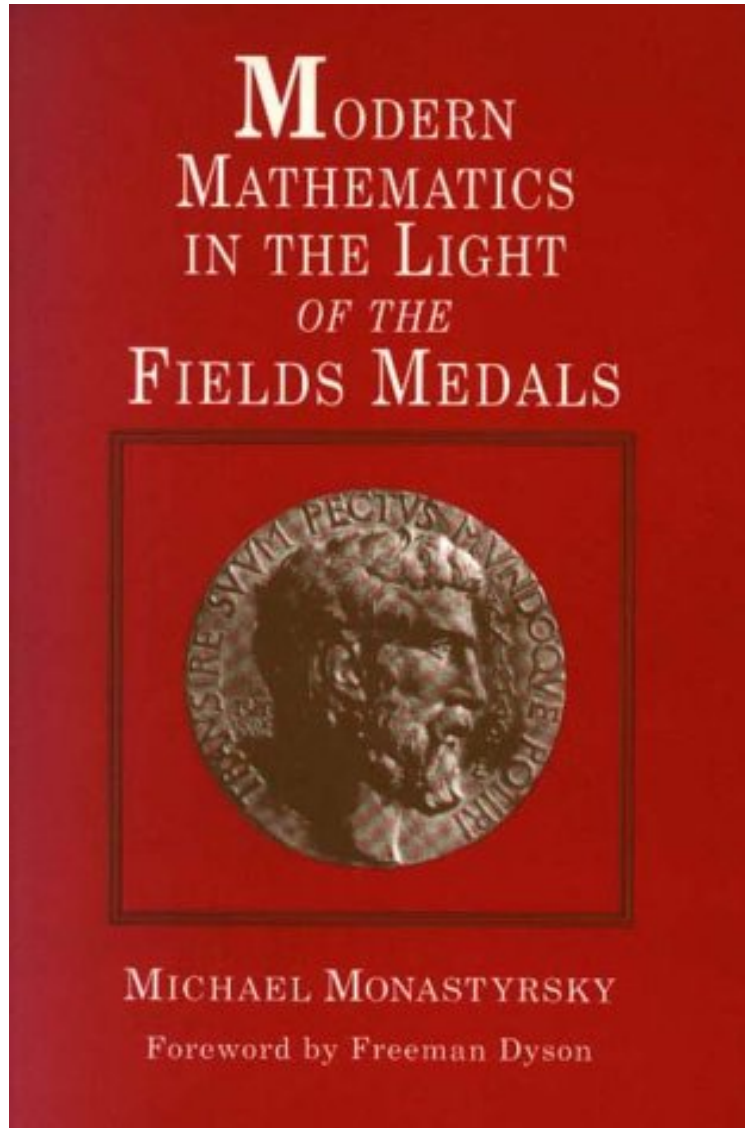


[Ebook pdf] Modern Mathematics in the Light of the Fields Medals

Modern Mathematics in the Light of the Fields Medals

Michael Monastyrsky

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Michael Monastyrsky : Modern Mathematics in the Light of the Fields Medals before purchasing it in order to gage whether or not it would be worth my time, and all praised Modern Mathematics in the Light of the Fields Medals:

2 of 2 people found the following review helpful. Monastyrsky does the impossibleBy Peter S. KeeganThis book, within 150 pages, not only attempts to describe the efforts of the mathematical Fields Medal winners up until 1994, but actually tries to use it as a compass to assess where the field of mathematics is going. Not an easy task, even for this mathematical polymath. It is rare for professional mathematicians to try to put into plain English what they are

working on, but the author makes just such an effort, and I think it is a needed one. 7 of 7 people found the following review helpful. Essential for the budding researcher

By WatermelonMan

So what is mathematics anyway? You may think you know, especially if you are a math grad student, but unless you're familiar with the contents of this book, you don't! This book was a real eye-opener for me. Basically it covers what is considered to be important mathematics by the math community at large by recounting the discoveries/creations of the Fields Medalists. I found it fascinating how the Fields Medalists' work tied together large areas of mathematics together, and how many times this intertwining nature of their work wasn't realized until years later! This book is rather incomprehensible initially, even if delightfully put together. The first time I read it, I couldn't pronounce some of the words. The second time, I knew what some of those words meant. The third time, I saw how the words I was comfortable with were related with those I weren't. One can read sections over and over again, each time having gained more knowledge of the mathematics involved, and still get a handy pointer on what to learn next. I think that is the greatest thing about the book: one can see the relation of what one is doing to the Grand Plan of mathematics and how the latter developed and is growing even now. I've only gone over the topology section in some depth, since that is my area, but I've found it useful for pointing me towards what to concentrate on. The bibliography is very useful in that regard; I feel it could be more extensive, but certainly it does an admirable job in listing some of the more useful references.

Dyson's introduction describes this book as a "roadmap". Seen that way, you should get plenty of use out of it over a long period of time, although perhaps not immediately.

9 of 9 people found the following review helpful. Essential mathematical culture for the mathematician

By A Customer

Most professional mathematicians know next to nothing about branches of mathematics outside their own narrow specialty. If this describes you, then you *must* read this book. This beautiful little book of Monastyrsky gives a brilliant exposition of the work of all the Fields medalists up to and including the 1994 winners. It seems impossible in such a small amount of space to assume no more than what the average mathematician can be expected to know, and yet at the same time to provide enough technical detail for the reader to gain an accurate understanding of the content and significance of the major theorems of all the medalists. Perhaps this is actually impossible, but Monastyrsky comes as close as is humanly possible to achieving this goal. This book will broaden your mathematical culture more than any other single book I know. It was not until I read this book that I learned how simply the exotic structures on S^7 may be described, or what Margulis got his Fields medal for.

Warning: if you do not have at least a graduate-level education in mathematics, most of the book will be incomprehensible. Although there are some historical notes and insights into people's personalities scattered throughout the book, the intended audience is unquestionably the research mathematician who wants to know more than just the buzzwords associated with each Fields medalist.

This small book demonstrates the evolution of certain areas of modern mathematics by examining the work of past winners of the Fields Medal, the "Nobel Prize" of mathematics. Foreword by Freeman Dyson.

Language Notes
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