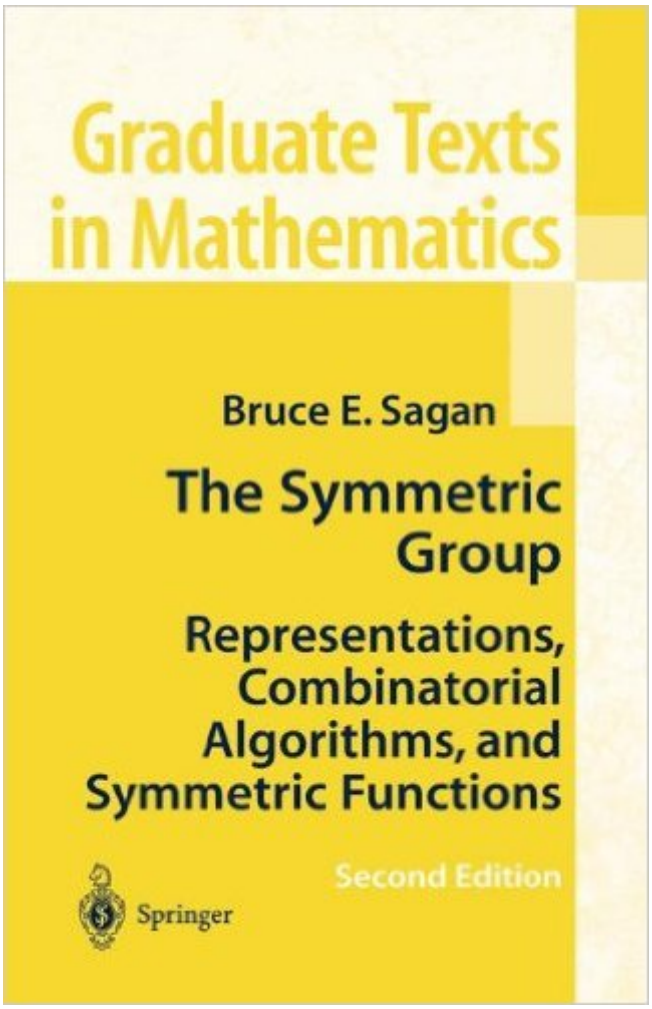
The Symmetric Group: Representations, Combinatorial Algorithms, And Symmetric Functions (Graduate Texts In Mathematics, Vol. 203)



Synopsis

This book brings together many of the important results in this field. From the reviews: ""A classic gets even better....The edition has new material including the Novelli-Pak-Stoyanovskii bijective proof of the hook formula, Stanleyâ ™s proof of the sum of squares formula using differential posets, Fominâ ™s bijective proof of the sum of squares formula, group acting on posets and their use in proving unimodality, and chromatic symmetric functions." --ZENTRALBLATT MATH

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Customer Reviews

This book is excellent. The material is presented clearly and concisely. It makes the subject matter accessible and interesting. I used it as the text for a one-semester graduate subject. I completed all of the exercises, so it is well-paced for this kind of study. I started with only an introductory knowledge of group theory, so it is self-contained. The only drawback is that there are no solutions to any of the exercises. If it had this, it would be a perfect bok.

Sagans book makes representation theory easy. The book first covers representations using modules and then choosing a basis to show the matrix approach. With every new topic he develops it using what Doron Zeilberger has dubbed the Gelfand Principle ([...]) The principle is: "Always chooses the smallest example to make a point". It isn’t easy to find the smallest example when Sn grows as quickly as it does, but Sagen always manages to do it.The ensuing chapters follow in the same vein. Ideas are introduced and explained, sometimes with pictures, sometimes with

calculations, but always as clearly as can be.To read this book does require a firm grounding in linear algebra, as well as abstract algebra. Time reading it is time well spent.

I’m a graduate student in mathematics, and I decided to take a qualifying examination in the area of Representation Theory, despite the fact that my high-level algebra experience is basically zero. To make matters worse the Professor for the topic, who is very highly acclaimed in the field, has no interest on lecturing on the the fundamentals of the theory. My entire class was feeling very frustrated as he lectured on about his areas of potential research without actually covering the underlying theory first.Thank god I found this book, which is very accessible, and provides three different approaches to the the topic. I highly recommend it.

for the Working Mathematician (Graduate Texts in Mathematics)