

Special Relativity: An Introduction with 200 Problems and Solutions

By Michael Tsamparlis



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Writing a new book on the classic subject of Special Relativity, on which numerous important physicists have contributed and many books have already been written, can be like adding another epicycle to the Ptolemaic cosmology. Furthermore, it is our belief that if a book has no new elements, but simply repeats what is written in the existing literature, perhaps with a different style, then this is not enough to justify its publication. However, after having spent a number of years, both in class and research with relativity, I have come to the conclusion that there exists a place for a new book. Since it appears that somewhere along the way, mathem- ics may have obscured and prevailed to the degree that we tend to teach relativity (and I believe, theoretical physics) simply using "heavier" mathematics without the inspiration and the mastery of the classic physicists of the last century. Moreover current trends encourage the application of techniques in producing quick results and not tedious conceptual approaches resulting in long-lasting reasoning. On the other hand, physics cannot be done a 'la carte stripped from philosophy, or, to put it in a simple but dramatic context A building is not an accumulation of stones! As a result of the above, a major aim in the writing of this book has been the distinction between the mathematics of Minkowski space and the physics of r- ativity.



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Editorial Review

From the Back Cover

This textbook develops Special Relativity in a systematic way assuming no prior knowledge of Relativity; however the student is assumed to be familiar with the basics of the standard vector calculus.

The approach is structural in the sense that it develops Special Relativity in Minkowski space following the same steps with the development of Newtonian Physics in Euclidian space. A second characteristic of the book is that it discusses the mathematics of the theory independently of the physical principles, so that the reader will appreciate its role in the development of the physical theory.

The book is intended to be used both as a text-book for a teaching course in Special Relativity but also as a reference book for the future. In that respect it is linked to an online repository with more than 500 problems, carefully classified according to subject area and solved in detail, providing an independent problem book on Special Relativity.

Users Review

From reader reviews:

Karen Moore:

The book Special Relativity: An Introduction with 200 Problems and Solutions make you feel enjoy for your spare time. You should use to make your capable more increase. Book can for being your best friend when you getting strain or having big problem with your subject. If you can make reading through a book Special Relativity: An Introduction with 200 Problems and Solutions to get your habit, you can get more advantages, like add your own capable, increase your knowledge about a number of or all subjects. You are able to know everything if you like available and read a book Special Relativity: An Introduction with 200 Problems and Solutions. Kinds of book are a lot of. It means that, science publication or encyclopedia or other folks. So, how do you think about this guide?

Danny Chamberland:

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Matthew Fry:

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Lisa Gregory:

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