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<<相对论量子力学>>

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前言

I always thought I would write a book and this is it. In the end, though, hardly wrote it at all, it evolved from my research notes, from essays I wrote for postgraduates starting work with me, and from lecture handouts I distribute to students taking the relativistic quantum mechanics option in the Physics department at Keele University. Therefore the early chapters of this book discuss pure relativistic quantum mechanics and the later chapters discuss applications of relevance in condensed matter physics. This book, then, is written with an audience ranging from advanced students to professional researchers in mind. I wrote it because anyone aiming to do research in relativistic quantum theory applied to condensed matter has to pull together information from a wide range of sources using different conventions, notation and units, which can lead to a lot of confusion (I speak from experience). Most relativistic quantum mechanics books, it seems to me, are directed towards quantum field theory and particle physics, not condensed matter physics, and many start off at too advanced a level for present day physics graduates from a British university. Therefore, I have tried to start at a sufficiently elementary level, and have used the SI system of units throughout.

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内容概要

Unlike so many other supportive families, mine did not proof-read, or type this manuscript, or anything else. In fact they played absolutely mo part in the preparation of this book, and distracted me from it at every opportunity. They are not the slightest bit interested in physics and know nothing of relativity and quantum theory. Their lack of knowledge in these areas does not worry them at all. Furthermore they undermine one of the central tenets of the theory of relativity, by providing me with aunique frame of reference. Nonetheless, I would like to dedicate this book to them, Jo,Jessica, Susanna and Elizabeth.

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