

Preface

Sometime in early 1994, I received a letter from World Scientific, Singapore, inviting me to write a book on anyons. That made me think about the whole thing. Initially I was not sure if I should spend about two years of my research career in such a venture. At that time I went through the literature on this field and I had a careful look at the only monograph on this subject by Lerda as well as the book on anyon superconductivity edited by Wilczek. While I liked parts of these books (and their influence is apparent in parts of the book), I also felt that our perceptions are somewhat different. Having worked on both the non-relativistic as well as the relativistic anyon models, I was finally convinced that perhaps the time had come to accept this opportunity and put forward my point of view and hence this book.

As I started the planning of the book, I realized that a lot of work has been done in the last two decades in this field and it was not possible to cover everything in this monograph. I then decided that instead of pretending to be objective, it was better to include those topics which I consider important. However, I felt that I should at least give a brief description of the omitted topics and also give a couple of references for each of these topics so that the interested reader can follow the developments in these fields. I am somewhat lucky in that many of these topics have been adequately covered in the literature.

Even though so much work has been done in this field in the last two decades, I feel that this area is still in its early developmental stage and it is not completely clear as to what direction it will take in the future. This is because even the basic problem of the statistical mechanics of a non-interacting anyon gas is still an unsolved problem. I strongly believe that unless one can solve this basic problem, no qualitative progress is possible

in this field, since in the absence of this bench-mark study, any calculation including interactions will always be unreliable.

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Avinash Khare
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