

# PREFACE

Neutrino physics is one of the fastest growing fields in physics and today it is on the way to becoming a precision science. Major results from all around the world have now provided compelling evidence for physics beyond the Standard Model of particle physics—for the very first time.

It was in this context that a meeting entitled “Neutrino 2001” was held in February, 2001, at the Institute of Mathematical Sciences, to bring together “neutrino physics enthusiasts” from all over India and even from major laboratories around the world such as the *Sudbury Neutrino Observatory* in Canada and *Gran Sasso* in Italy. The talks delivered at that meeting were in the nature of pedagogic reviews on various aspects of neutrino physics.

It was after this meeting that Prof. Avinash Khare suggested that the publication of such reviews would be welcomed by the physics community. On behalf of the **Indian National Science Academy**, he and Prof. N. Sathyamurthy offered to publish these “*Perspectives in Neutrino Physics*”. Especially in the context of current activity for an **India-based Neutrino Observatory (INO)**, we believe that such a collection of reviews will not only be timely and create an awareness about the subject but also highlight the need to embark on neutrino experiments in India.

The reviews that appear in this volume are aimed at both the specialist and non-specialist but interested reader who would like to get as complete a picture as possible of the present status of neutrino physics and its future prospects. As with all other such attempts in a fast-growing field, we are aware that we will only have limited success in keeping up with the sheer volume of new ideas and work in this area. However, we have tried to highlight the major results and the open issues in this field, while keeping the volume self-contained as far as the basic neutrino physics is concerned.

We would like to express our gratitude to all the authors of the articles in this volume for giving their time and effort in contributing to these Proceedings. We would like to thank Prof. Avinash Khare and Prof. N. Sathyamurthy for suggesting such an endeavour to us and for continued support and patience throughout. We express our gratitude to Prof. M.C. Gonzalez-Garcia for giving us permission to use the figures that appear on the cover page. We thank Mr. A.K. Tagore for critical inputs about formatting and other publication details. Finally, we thank Ms. Ambika Vanchinathan for collating all the articles into a homogeneous whole, a job which involved more than just type-setting in L<sup>A</sup>T<sub>E</sub>X.

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*Guest Editors*

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