

Preface

One of the most important activities of the Southeastern European Network in Mathematical and Theoretical Physics (SEENET-MTP), since its founding in 2003, has been connected with the reinforcement of the interest in basic sciences, in particular in Physics and Mathematics, among undergraduates and high school students. A direction in which the Network understood to act in order to accomplish this objective was to enhance the access of the young population and of the teachers of basic sciences to scientific literature. This direction was imposed by the fact that, through various activities of the Network and of many other partners, it has been noted a lack of publications suitable for these main target groups in the region of Balkans, in particular publications in the mother tongues of the Southern Slavic population.

The book we are providing now intends to trigger and contribute to the coverage of this hole, offering to the readership a volume of scientific papers tackling intricate topics in a more or less popular way, probably, one of the first monographs of this quite demanding type in the region. It is a bilingual book, the papers being presented both in English and in Serbian, a response to the objectives defined, first of all, by UNESCO and, secondly, by Serbian institutions. Depending on the demands and on the available financial support, the monograph will be offered for publication in other Balkan languages too. It is obvious that a multilingual scientific monograph could have not only a scientific, but also a cultural dimension, allowing for a better understanding of the educational and cultural traditions of the countries in the region.

Based on the experience connected with the promotion of science we have had throughout the years, the editors of this volume looked for scientific contributions presented in a form accommodating a large audience. We do hope that we succeeded and that this monograph issue will really have a strong impact, enjoy widespread currency and be interesting to the lay population wanting to find information on the new trends and applications of modern science in particular in Theoretical and Mathematical Physics. The contributions refer to some of the most important and most intriguing scientific topics in modern science: particle physics, black holes and extra dimensions, string theory and its testing, stability of matter, dark mat-

ter, history and philosophy of physics, cosmology and astrobiology, human genome, etc. Due to the wide range of the topics, we have not organized the papers on many chapters. Even a number of contributions are quite correlated, each of them can be seen also as an independent one, and we find they should be presented in alphabetical order.

The very idea of such a publication arose during the first Romanian-Serbian meeting of high school students and undergraduates held in Craiova in 2008. From a preliminary list of possible contributors to the monograph, we are in position to present here about half of the contributions. Word-processing has been based on authors' sample files and the editors, beside some general instructions and comments, have not done essential corrections. We would like to thank to the all authors for excellent and original contributions, to the referees for their valuable comments and assistance in improving the quality of the publication. We would like to thank Dragoljub Dimitrijević for his efforts in maintaining a permanent contact with the authors and in the technical preparation of the articles. Acknowledgement goes to Ms Daniela Janković for her significant contribution to the translation of a part of the book, to the publishing company "Dosije" for the great job done during the whole process of publication, as well as to Milan Milošević, Jelena Stanković and the Faculty of Science and Mathematics Niš, as the main publisher, for their active involvement in managing the whole project.

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