

FOREWORD

The “2nd National Conference on Theoretical Physics” was held between 26–29 August 2004 at the University “Ovidius”, Constanța. It was organized by the Department of Theoretical Physics of “Horia Hulubei” National Institute of Physics and Nuclear Engineering, Bucharest, “Ovidius” University, Constanța and “Bogoliubov” Laboratory of Theoretical Physics, Joint Institute of Nuclear Research, Dubna-Russia.

The Conference enjoyed a large participation (about 100 scientists) from Romania (Bucharest, Cluj, Constanța, Iași, Timișoara) and abroad (IUCN-Dubna-Russia, SUA, Germany, Republic of Moldova, Ukraine, Belarus, Serbia and Montenegro, United Arab Emirates).

More than 60 papers have been presented at the Conference and, the present volume contains the first part of the Proceedings. A second part will be published in a subsequent issue of this Journal.

On behalf of all the participants we would like to thank for the financial support from:

- The Ministry of Education and Research;
- Joint Institute of Nuclear Research, Dubna, Russia under the Țițeica-Markov Collaboration;
- “Horia Hulubei” National Institute of Physics and Nuclear Engineering;
- “Ovidius” University, Constanța.

The topics of the Conference have covered the main results obtained in the last two years (during the time passed from the 1st National Conference on Theoretical Physics, 13–16 September 2002, Bucharest) in Romania and not only, on:

- Quantum Field Theory, Gravitation, Elementary Particles;
- Atomic, Molecular and Nuclear Physics;
- Mathematical Physics and Statistical Physics;
- Computational Physics and other Interdisciplinary Fields.

Let us thank the local organizers, the “Ovidius” University of Constanța and especially Professor Victor Ciupină, the Rector of the University, for their hospitality and their efforts to make our staying in Constanța as pleasant as possible. Also we have to thank our technical staff (A. T. Grecu – Conference Secretary, A. Socolov and Margareta Oancea), and to all the people who contributed to the success of the Conference.

December 15th 2004,
Bucharest

Acad. Dr. *Horia Scutaru*
Dr. *Dan Grecu*
Dr. *Sabin Stoica*