

## FOREWORD

*The long-term strategy adopted by the Faculty of Physics from the University of Bucharest was focused on developing the scientific research in modern topics of theoretical, experimental and applied physics, as well as in inter-disciplinary fields as BIOPHYSICS, MEDICAL PHYSICS, PHYSICS and PROTECTION of the ENVIRONMENT, INFORMATICS PHYSICS. Following this strategy, the Faculty of Physics diversified the research activity, developing new research laboratories and encouraging the academic community to perform modern and competitive research projects.*

*The scientific research in the Faculty of Physics is performed in groups and research centers in all the departments, the terminal year undergraduate students and graduate students being involved at high extent in the research teams. There are 5 research centers already accepted at national level as CENTERS OF EXCELLENCE IN PHYSICS RESEARCH. The Faculty of Physics is partner in many common research programs with prestigious foreign universities and research institutes.*

*Annually, in the Faculty of Physics was organized the "ANNUAL SCIENTIFIC SESSION OF THE FACULTY", where the most interesting scientific results obtained, by professors and students, in the faculty during the past academic year, were presented. Together with the teaching staff, a large number of students and researchers from different institutes and universities attended the session. Quite often, results from the international cooperation were presented.*

*In the annual session of May 30, 2003, two plenary lectures and 119 invited lectures and contribution, belonging to the above participants, were presented in 9 parallel sessions (Atmosphere and Earth Science, Environment Protection; Atomic and Molecular Physics, Astrophysics; Electricity and Biophysics; Nuclear and Elementary Particles Physics; Optics, Spectroscopy, Plasma and Lasers; Polymer Physics; Solid State Physics and Materials Science; Statistical Physics and Quantum Mechanics; Theoretical Physics and Applied Mathematics).*

*The publications of the selected papers in one of the best Romanian journals will stimulate everybody's interest, especially that of young physicists, for the scientific research. The articles selected for publication contain the abstracts and the extended papers, figures, captions of figures and references, prepared according with the Instructions to Authors of Romanian Reports in Physics.*

*The scientific session of this year, was a success, as commented by the participants. Many thanks are due to those who, by their participation in the conference, have contributed to its success.*

*We gratefully acknowledge the significant contribution to this success of Prof. Dr. Ioan MIHĂILESCU, Rector of University of Bucharest, Prof. Dr. Ștefan ANTOHE the Dean of the Faculty of Physics, Assoc. Prof. Dr. Emil BARNA- Vice-dean, Prof. Dr. Alexandru JIPA-Scientific secretary and Professors L. GEORGESCU, F. POPESCU, A. POPESCU, D. BRÂNCUȘ, T. TUDOR, V. FLORESCU, A. COSTESCU and I. ARMEANU, heads of departments within the Faculty of Physics. We also have to acknowledge the contributions of our colleagues Prof. Dr. Iancu IOVA, Assoc. Prof. Dr. Sabina STEFAN, Lecturer Dr. Mircea BULINSCHI and Lecture Dr. Andrei BARBORICĂ, to the organizing of scientific meeting as well as their editorial activity on the papers selected to be published in Romanian Reports in Physics.*

**Professor Dr. Ștefan ANTOHE**  
Dean of Faculty of Physics