PREFACE

The Workshop: **Scientific and Human Legacy of Julius Wess — JW2011** was organized in Donji Milanovac (Serbia), August 27–29, 2011, by the Department of Physics and SEENET-MTP Office, University of Niš and the Physical Society Niš as a local co-organizer. The Workshop JW2011 was an integral part of the Balkan Summer Institute — BSI2011 (August 19–September 1, 2011). BSI2011 consisted of 4 events and attracted 178 participants from 28 countries.

The workshop “Scientific and Human Legacy of Julius Wess” was dedicated to the memory of Julius Wess (December 5, 1934 in Oberwölz – August 8, 2007 in Hamburg). Julius Wess was one of the most influential physicists in the second half of the 20th century. His work in the ’70s and the ’80s was crucial for the development of supersymmetry and supersymmetric field theory and particle models. In the ’90s he became interested in noncommutative geometry and in formulating symmetries in physics by generalizing the notion of a group; from then on he worked on subjects like quantum groups, quantum deformations, noncommutative field theory and particle physics. Although his work was per se in mathematical physics, he always emphasized the importance of the connection of theoretical models with experimental results.

Julius Wess was very active not only in science. In 1999 he initiated a project called “Wissenschaftler in globaler Verantwortung” (WIGV; “scientists in global responsibility”). This initiative strived to revive the collaboration and cooperation among the scientists from former Yugoslavia that during the 90s was lost due to disintegration of former Yugoslavia, unfortunate political events and military conflicts. A second aim of the WIGV initiative was to improve the collaboration between the scientists from this region and the rest of Europe and in particular Germany. A number of scientific visits, conferences, workshops and similar meetings resulted from the WIGV project. Once WIGV terminated, its role was partially taken over by the Southeastern European Network in Mathematical and Theoretical Physics (SEENET-MTP). The Network was established in Vrnjačka Banja, Serbia, during the Workshop “Mathematical, Theoretical and Phenomenological Challenges Beyond the Standard Model: Perspectives of Balkans Collaboration”, August 29–September 2, 2003, with great support from Julius Wess. He was the coordinator of the advisory scientific committee of the network.

The work of Julius Wess (in both its scientific and human aspects) motivated his collaborators, students and friends from former Yugoslavia and the surrounding regions to organize a workshop dedicated to his scientific and human legacy. The

workshop was to be held on the Danube river, the river Julius Wess liked very much. The idea was first brought up after his funeral in Hamburg. It was then elaborated during and after the “Memorial Conference in Honor of Julius Wess” held in Munich in November 2008. The outcome was that M. Dimitrijević, G. Djordjević, H. Grosse, M. Haack, D. Luest, H. Nicolai and G. Senjanović decided to organize a smaller workshop on the “Scientific and Human Legacy of Julius Wess” in Serbia.

Despite the limited budget, about 40 invited participants from 14 countries attended the workshop JW2011. There were 12 talks, both scientific and with some personal recollections of speakers about their work and interaction with Julius Wess. 18 invited contributions have been selected for publication. All papers have been peer-reviewed. The manuscripts have been submitted to the guest editors of the International Journal of Modern Physics: Conference Series (IJMPCS), who selected the referees after the workshop. Many thanks to the referees whose suggestions significantly improved the scientific quality of the contributions.

The present special volume of the IJMPCS contains selected original papers related to the talks presented at the workshop and also covers a variety of topics close to the original fields of Julius Wess’ research. The main scientific topics considered during the workshop and in this volume are: supersymmetry, various aspects of quantum field theory, string theory, particle physics, noncommutative field theory quantum deformation and quantum spaces. Some of the contributions describe the role of Julius Wess in WIGV, SINSEE and other projects devoted to the support of scientists, in particular from less developed and/or instable parts of Europe. The papers are listed in alphabetical order.

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