

PREFACE

These Conference Proceedings contain the contributions and lectures presented at the XXIst International Conference on Geometry, Integrability and Quantization which took place at the Koral Hotel in the amazing geographical frame of the Saints Constantine and Elena resort in Varna, Bulgaria, between June 3-8, 2019.

After twenty consecutive and successful editions, it can be presumed that the series “Geometry, Integrability and Quantization” has established itself as one of the solidly reputed meetings in the interdisciplinary fields of mathematical physics and geometry. Following the conception of the organizers of the first edition, the size of the event has been kept to a modest number of about fifty participants, a limitation that has the gratifying advantage of enabling the participants to share their experience in scientific discussions beyond the official schedule, thus helping to create the basis for new collaborations. The outcome of the colloquium shows that this interaction principle has once more been faithfully maintained.

Mainly promoted by the Institute of Biophysics of the Bulgarian Academy of Sciences, this year the conference was organized in collaboration with the Technical University of Varna, the Tokyo University of Science and the Universidad Complutense of Madrid. Participants from Europe, Asia and the Americas presented their research, the subject matter of which was wide-ranging. Results in Cosmology, noncommutative Field Theory, Quantum Gravity, classical Differential Geometry or (Super)integrable Systems were presented, among other topics, some of which referred to current applications like Color Imaging or acoustic modeling. Intended for a wide dissemination of the subjects discussed in the meeting, some of the original slides of the talks can be found at the internet site of the conference.

The Lecture Course delivered by highly reputed specialist covered some of the main topics of the conference:

1. Rafael López (University of Granada) on *Constant Mean Curvature Surfaces with Boundary*

In addition to these Lectures, the Plenary Talks dealt with more specialized problems and subjects, illustrating some recent advances and novel approaches to various matters:

1. Ildefonso Castro: *On a Problem of David A. Singer About Prescribing Curvature for Curves*
2. Laszlo Feher: *Recent Results in the Hamiltonian Reduction Approach to Integrable Many-Body Systems*