Preface

The Fourth International Conference "Symmetry in Nonlinear Mathematical Physics" was traditionally organized by the Institute of Mathematics of the National Academy of Sciences of Ukraine and M. Dragomanov National Pedagogical University. It continues the series of the the scientific meetings started in 1995 due to efforts of Professor Wilhelm Fushchych. The specific feature of the conference held in Kyiv, July 9–15, 2001 was that it was a part of the Ukrainian Mathematical Congress devoted to 200 Anniversary of the great Ukrainian mathematician Mykhailo Ostrohrads'kyi.

The conference generated significant interest of mathematicians and physicists. More than 120 participants from 26 countries presented their talks the majority of which is included in these Proceedings. The Proceedings contain also papers whose authors were unable to come to conference but submitted their papers.

The Proceedings are published in two parts and contain 109 papers. The titles of conference talks not presented for publication at the Proceedings are given in the end of part 2.

A number of papers included into Proceedings is devoted to traditional subjects of Lie theory, i.e., analysis of symmetries of nonlinear partial differential equations, symmetry reduction and construction of exact solutions. In these papers which are collected in the first part both classical Lie methods and modern trends in symmetry analysis are represented. The first part contains also papers related to the inverse scattering approach. The first paper includes the biographical essay of M. Ostrohrads'kyi.

The trend of our conference is continuous increase of contributions devoted to problems of algebra, group theory and symmetries in physics and other natural sciences. These contributions are collected in the second part which includes papers devoted to representations and applications of classical and deformed Lie algebras, supersymmetry and its various generalizations.

We believe that all papers present a valuable contribution to the symmetry analysis of equations of mathematical physics and other applications of symmetry.

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