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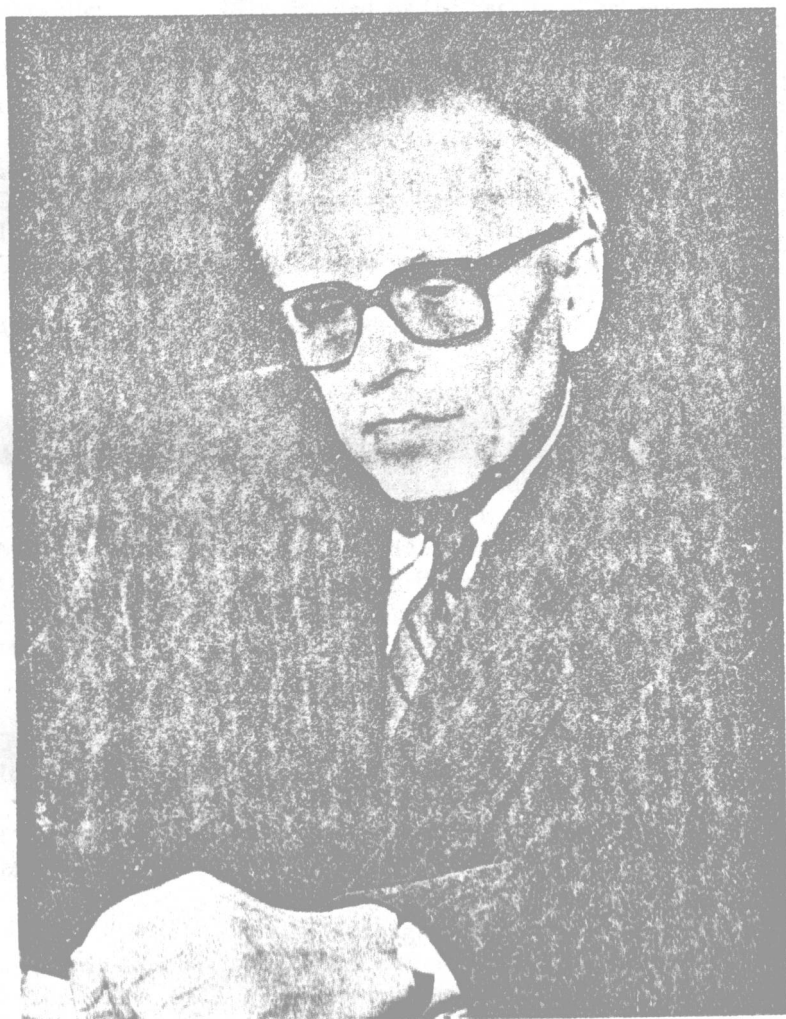
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Dedicated to the late A. D. Sakharov

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III	Marseille, France	1974	Printed by the Faculty of Science, University of Nijmegen.
IV	Nijmegen, The Netherlands	1975	Eds. A. Janner, T. Janssen and M. Boon, Lecture Notes in Physics 50, Springer, Heidelberg, 1976.
V	Montreal, Canada	1976	Eds. R.T. Sharp and B. Kolman, Academic Press, 1977.
VI	Tübingen Germany F.R.	1977	Eds. P. Kramer and A. Rieckers, Lecture Notes in Physics 79, Springer, Heidelberg, 1978
VII	Austin, Texas, USA	1978	Eds. W. Beiglböck, A. Bohm and E. Takasugi, Lecture Notes in Physics 94, Springer, Heidelberg, 1979.
VIII	Kibbutz Kiriath Anavim, Israel	1979	Eds. L.P. Horwitz and Y. Ne'eman, A. Hilger and the Israel Physical Society, The American Institute of Physics, 1980.
IX	Cocoyoc, Mexico	1980	Ed. K.B. Wolf, Lecture Notes in Physics 135, Springer, Heidelberg, 1980.
X	Canterbury, England	1981	Eds. L.L. Boyle and A.P. Cracknell, Physica A, Vol. 114A, No. 1-3, 1982
XI	Istanbul, Turkey	1982	Eds. M. Serdaroglu and E. İnönü, Lecture Notes in Physics 180, Springer, Heidelberg, 1983.
XII	Trieste, Italy	1983	Eds. G. Denardo, G. Ghirardi and T. Weber, Lecture Notes in Physics 201, Springer, Heidelberg, 1984.
XIII	College Park, Maryland, USA	1984	Ed. W.W. Zachary, World Scientific, Hongkong, 1984.
XIV	Seoul, Korea	1985	Ed. Y.M. Cho, World Scientific, Hongkong, 1986.
XV	Philadelphia, Pennsylvania, USA	1986	Ed. R. Gilmore, World Scientific, Hongkong, 1987.
XVI	Varna, Bulgaria	1987	Eds. H.D. Doebner, J.D. Hennig and T.D. Palev, Lecture Notes in Physics 313, Springer, Heidelberg, 1988.

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Preface

The XVIII International Colloquium on Group Theoretical Methods in Physics took place in Moscow on June 4–9, 1990 under the sponsorship of IUPAP, the Nuclear Physics Department of the USSR Academy of Sciences, and the Lebedev Physics Institute of the USSR Academy of Sciences. It gathered more than 300 participants from 30 countries, including developing countries. The general rules, terms, and places of all colloquia are established by an International Standing Committee. The program of the colloquium was compiled by the Local Organizing Committee under the supervision of an Advisory Committee and some members of the Standing Committee. All the practical aspects of organizing the colloquium were seen to by the members of a Working Group.

The participants of the colloquium gave more than 300 talks and reports: 28 plenary (40min), 27 review (30min), and 130 original (15min) talks made in 18 parallel section sessions, and about 130 poster reports. In addition, a special session was devoted to the ceremony at which the Wigner medal was awarded.

Academician A. D. Sakharov was the first to agree to be a member of the Advisory Committee of the colloquium. Unfortunately, his premature death prevented his participating in the colloquium, as well as carrying out his other plans. We would like to dedicate this volume (by the consent of the Standing Committee) to the memory of the late A. D. Sakharov on the eve of his 70 th birthday (21 May 1991). Sakharov's memorial lecture was part of the closing ceremony of the colloquium.

This volume contains about 70 papers devoted mainly to such subjects as spectrum generating groups, quantum groups, symmetries of equations, quantum mechanics, coherent states, and group representations. Other papers received by the editors (also about 70 papers) would constitute another volume with the emphasis on problems of quantum field theory, solid state physics, quantum physics, integrable systems, algebras, and superalgebras.

The realization of the colloquium would have been impossible but for the enormous and selfless work of the members of the Working Group, which had united on an informal basis physicists from different institutes and cities of the Soviet Union. Extremely important for the organization of the colloquium was the partnership with Prof. H. D. Doebner of the Technical University of Clausthal (Germany). Moreover, this volume was prepared for publication with the help of D. Kruse and M. Wehrhahn from the Technical University of Clausthal. We express our deep gratitude to all these people.

Moscow, November 1990

V. V. Dodonov
V. I. Man'ko

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