MECHANICS

S. P. Strelkov

PART ONE
Mechanics of Rigid Bodies

PART TWO
Mechanics of Deformable Bodies

PART THREE
Oscillations and Waves.
Elements of Acoustics.
Fundamentals of Special
Theory of Relativity

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S. P. Strelkov

Translated from the Russian

by V. M. VOLOSOV, D.Sc.

and I. G. VOLOSOVA

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Foreword to the Third Russian Edition

Mechanics by late Professor S. P. Strelkov is the first part of the general course in physics meant for students of Physical and Mathematical Departments of universities and pedagogical colleges.

The book is based on the material of the seminars and lectures given by the author for many years at the Physical Department and at the Professional Courses for college teachers of the Lomonosov State University of Moscow.

The first Russian edition of the book appeared in 1956. In the second edition (1965) the author perfected the course, extended the material of some sections related to the branches of engineering and science whose importance has increased in recent years (such as satellite and spacecraft flight, weightlessness, and motion with supersonic velocity) and introduced into the course the fundamentals of special relativity theory.

The author did not complete the third edition of the book but performed the necessary preparatory work. In accordance with the new extended school programmes in mathematics and physics, the third edition includes a number of additional theoretical questions. For instance, the tensor character of the moment of inertia and the basic tensors dealt with in mechanics of isotropic elastic body are discussed, the chapter devoted to the special relativity theory is revised and extended. However, the visual physical interpretation of the basic physical phenomena and laws characteristic of the previous editions has been retained.

In the preparation of the present edition of the course and its extension and further improvement much valuable work has been done by A. A. Kharlamov who collaborated with the author of the book for many years.

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