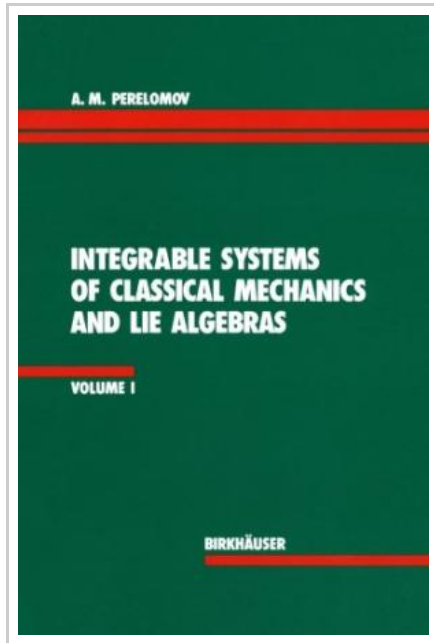




Integrable Systems of Classical Mechanics and Lie Algebras. Vol.1

By Perelomov

Book Condition: New. Publisher/Verlag: Springer, Basel | This book is designed to expose from a general and universal standpoint a variety of methods and results concerning integrable systems of classical mechanics. By such systems we mean Hamiltonian systems with a finite number of degrees of freedom possessing sufficiently many conserved quantities (integrals of motion) so that in principle integration of the corresponding equations of motion can be reduced to quadratures, i.e. to evaluating integrals of known functions. The investigation of these systems was an important line of study in the last century which, among other things, stimulated the appearance of the theory of Lie groups. Early in our century, however, the work of H. Poincaré made it clear that global integrals of motion for Hamiltonian systems exist only in exceptional cases, and the interest in integrable systems declined. Until recently, only a small number of such systems with two or more degrees of freedom were known. In the last fifteen years, however, remarkable progress has been made in this direction due to the invention by Gardner, Greene, Kruskal, and Miura [GGKM 1967] of a new approach to the integration of nonlinear evolution equations known as the inverse scattering method or the method of isospectral deformations. Applied...



READ ONLINE
[3.99 MB]

Reviews

Extensive information for book fans. It is written in basic words and never hard to understand. It is extremely difficult to leave it before concluding, once you begin to read the book.

-- **Otis Wisoky**

This publication is great. It is full of wisdom and knowledge. You will not really feel monotony at any time of the time (that's what catalogs are for relating to when you ask me).

-- **Dr. Everett Dicki DDS**