

Kupershmidt, Boris A. (ed.)

Integrable and superintegrable systems. (English) Zbl 0943.00022
Teaneck, NJ: World Scientific Publishing. x, 388 p. (1990).

The articles of this volume will be reviewed individually.

Contents: Ivan Cherednik, The main soliton theorem (pp. 1-7); E. K. Sklyanin, Functional Bethe ansatz (pp. 8-33); Yitzhak Murometz and Solomon Razboynick, Integrability in models of two-dimensional turbulence (pp. 34-45); Mark J. Ablowitz, B. M. Herbst and J. M. Keiser, Solitons, numerical chaos and cellular automata (pp. 46-79); Tetsu Yajima and Miki Wadati, The unstable nonlinear Schrödinger equation (pp. 80-101); R. K. Dodd, Classification of integrable equations (pp. 102-133); A. T. Fomenko, List of all integrable Hamiltonian systems of general type with two degrees of freedom. "Physical zone" in this table (pp. 134-164); S. N. M. Ruijsenaars, Finite-dimensional soliton systems (pp. 165-206); John Gibbons and Boris A. Kupershmidt, Relativistic analogs of basic integrable systems (pp. 207-231); M. R. Adams, J. Harnad and J. Hurtubise, Liouville generating functions for isospectral flow in loop algebras (pp. 232-256); Randolph James Schilling, A loop algebra decomposition for Korteweg-de Vries equations (pp. 257-279); Allan P. Fordy, Energy dependent spectral problems: their Hamiltonian structures and Miura maps (pp. 280-306); F. Guil Guerrero, Commuting differential operators over integrable hierarchies (pp. 307-320); T. Khovanova, Lie superalgebra structure on eigenfunctions, and jets of the resolvent's kernel near the diagonal of an n th order ordinary differential operator (pp. 321-335); A. O. Radul, Superstring Schwartz derivative and the Bott cocycle (pp. 336-351); Pierre Mathieu, Super Miura transformations, super Schwarzian derivatives and super Hill operators (pp. 352-388).

Reviewer: [Reviewer \(Berlin\)](#)

MSC:

- [00B15](#) Collections of articles of miscellaneous specific interest
- [37-06](#) Proceedings, conferences, collections, etc. pertaining to dynamical systems and ergodic theory
- [37K10](#) Completely integrable infinite-dimensional Hamiltonian and Lagrangian systems, integration methods, integrability tests, integrable hierarchies (KdV, KP, Toda, etc.)
- [37Jxx](#) Dynamical aspects of finite-dimensional Hamiltonian and Lagrangian systems
- [37Kxx](#) Dynamical system aspects of infinite-dimensional Hamiltonian and Lagrangian systems
- [35Q58](#) Other completely integrable PDE (MSC2000)

Cited in **3** Documents

Keywords:

[Integrable systems](#); [Superintegrable systems](#)