

**Lichtenberg, A. J.; Lieberman, M. A.**

**Regular and stochastic motion.** (English) Zbl 0506.70016

*Applied Mathematical Sciences*, 38. New York - Heidelberg - Berlin: Springer-Verlag. XXI, 499 p., 140 figs. DM 108.00; \$ 44.60 (1983).

For a scan of this review see the [web version](#).

**MSC:**

- 70G99 General models, approaches, and methods in mechanics of particles and systems
- 70H05 Hamilton's equations
- 70-02 Research exposition (monographs, survey articles) pertaining to mechanics of particles and systems
- 70F10 *n*-body problems
- 70K99 Nonlinear dynamics in mechanics
- 70L05 Random vibrations in mechanics of particles and systems
- 76X05 Ionized gas flow in electromagnetic fields; plasmic flow
- 80A32 Chemically reacting flows
- 70F15 Celestial mechanics
- 37D45 Strange attractors, chaotic dynamics of systems with hyperbolic behavior

Cited in **4** Reviews  
Cited in **371** Documents

**Keywords:**

stochasticity; canonical perturbation theory; mappings and linear stability; transition to global stochasticity; stochastic motion and diffusion; three or more degrees of freedom; dissipative systems; planetary motion; accelerators and beams; charged particles confinement; chemical dynamics; Hamiltonian bifurcation theory; nature and genesis of turbulence