

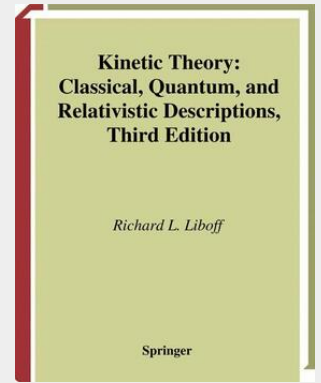
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## Kinetic Theory

Classical, Quantum, and Relativistic Descriptions

Kinetic Theory: Classical, Quantum, and Relativistic Descriptions goes beyond the scope of other works in the field with its thorough treatment of applications in a wide variety of disciplines. Its clear exposition and emphasis on concrete examples will make it not only an excellent graduate text but also a valuable resource for researchers in such disciplines as aerospace, mechanical, and chemical engineering; astrophysics, solid state and laser physics and devices, plasma physics, and controlled and thermonuclear fusion. Among the topics covered are: - The Liouville equation and analyses of the Liouville equation, including two independent derivations - The Boltzmann equation and Boltzmann's H-theorem - Analysis of the linearized collision operator - Fluid dynamics and irreversibility - Assorted kinetic equations with applications to plasmas and neutral fluids - Elements of quantum kinetic theory, including the Green's-function formalism and the Wigner-Moyal equation - Relativistic kinetic theory and Lorentz invariants - Kinetic properties of metals and amorphous media - Monte-Carlo analysis in kinetic theory - Kinetic study of shock waves This third revised edition features a new section on constants of motion and symmetry and a new appendix on the Lorentz-Legendre expansion.

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