Lecture Notes in Physics 739

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Editors

Computational Many-Particle Physics

Complicated many-particle problems abound in nature and in research alike. Plasma physics, statistical physics and condensed matter physics, as primary examples, are all heavily dependent on efficient methods for solving such problems. Addressing graduate students and young researchers, this book presents an overview and introduction to state-of-the-art numerical methods for studying interacting classical and quantum many-particle systems. A broad range of techniques and algorithms are covered, and emphasis is placed on their implementation on modern high-performance computers.

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