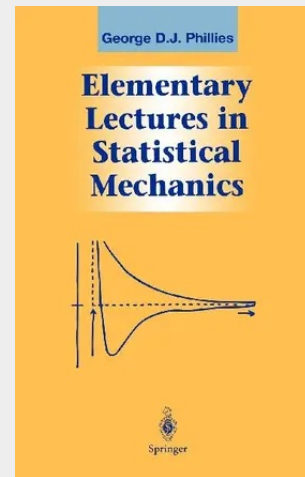


Elementary Lectures in Statistical Mechanics

This volume is based on courses on Statistical Mechanics which I have taught for many years at the Worcester Polytechnic Institute. My objective is to treat classical statistical mechanics and its modern applications, especially interacting particles, correlation functions, and time-dependent phenomena. My development is based primarily on Gibbs's ensemble formulation. Elementary Lectures in Statistical Mechanics is meant as a (relatively sophisticated) undergraduate or (relatively straightforward) graduate text for physics students. It should also be suitable as a graduate text for physical chemistry students. Physicists may find my treatment of algebraic manipulation to be more explicit than some other volumes. In my experience some of our colleagues are perhaps a bit over-enthusiastic about the ability or tendency of our students to complete gaps in the derivations. I emphasize a cyclic development of major themes. I could have begun with a fully detailed formal treatment of ensemble mechanics, as found in Gibbs's volume, and then given material realizations. I instead interleave formal discussions with simple concrete models. The models illustrate the formal definitions. The approach here gives students a chance to identify fundamental principles and methods before getting buried in ancillary details.

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