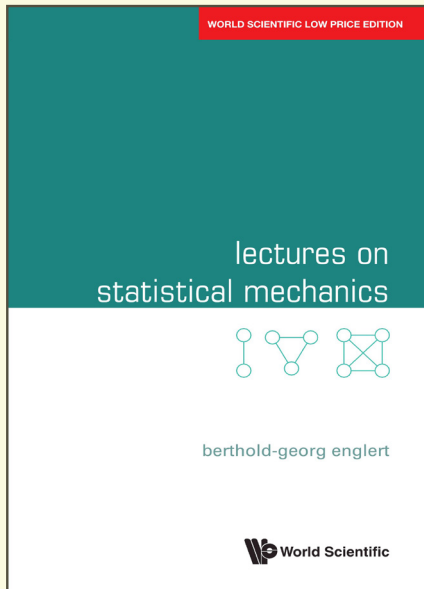


# Lectures on Statistical Mechanics



By **Berthold-Georg Englert**

*(National University of Singapore, Singapore)*

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## ABOUT THE BOOK

These lecture notes cover Statistical Mechanics at the level of advanced undergraduates or postgraduates. After a review of thermodynamics, statistical ensembles are introduced, then applied to ideal gases, including degenerate gases of bosons and fermions, followed by a treatment of systems with interaction, of real gases, and of stochastic processes.

The book offers a comprehensive and detailed, as well as self-contained, account of material that can and has been covered in a one-semester course for students with a basic understanding of thermodynamics and a solid background in classical mechanics.

## READERSHIP

Undergraduate and graduate students in Physics.

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## ABOUT THE AUTHOR

**Berthold-Georg Englert** received his doctoral degree from the University of Tübingen, Germany, in 1981, his postdoctoral education at UCLA from 1981 to 1985, and his habilitation in Munich in 1990. He taught at the University of Munich, at Texas A&M University, at the Technical University of Vienna, at the University of Ulm, at the University of Milan. Since 2002, he is at the National University of Singapore. His research touched many bases in theoretical physics. He contributed to the refinement of semiclassical methods in atomic physics (monograph in 1988), to the development of algebraic methods for handling quantum-optical master equations with a particular bearing on the theory of the micromaser, to the technical formulation of the principle of complementarity, to the understanding of the quantitative aspects of wave-particle duality, to non-standard schemes for quantum cryptography and direct quantum communication, to quantum estimation, and to Bayesian methods for processing quantum data.

He published *Lectures on Quantum Mechanics* in 2006, *Lectures on Classical Electrodynamics* in 2014, and *Lectures on Classical Mechanics* in 2015.

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