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## Quantum Foundations

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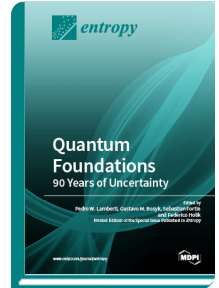
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Since its conception 90 years ago, the quantum uncertainty principle introduced by Werner Heisenberg lies behind most important features of quantum physics, and its implications have an impact that goes far beyond the physics community. This book focuses on the quantum uncertainty principle, providing an up-to-date examination of recent developments of its applications in quantum information theory. The book brings together several renowned experts working in the foundations of quantum mechanics and quantum information theory. The authors provide different approaches to the study of uncertainty relations and other fundamental aspects of the quantum formalism. Topics addressed include entanglement and Bell inequalities, the application of entropic information measures to the study of uncertainty inequalities, the characterization of deep learning networks in the context of adiabatic quantum computation, and the study of general properties of the set of quantum states. The content of this book will surely benefit both experienced and new researchers specializing in quantum information theory and the foundations of quantum mechanics.



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