

Special Issue

Quantum Theory 100 Years Later: Advances on Foundations and Applications

Message from the Guest Editors

Quantum mechanics has been one of the two major revolutions in physics of the XXth century, the other being special and general relativity theory. Its conceptual development has mainly been during the first three decades of that century. Quantum theory gave rise to a new paradigm about the very basic description of the microscopic world and of its reality, yielding the necessity of a completely new way of describing it, often at variance with our experience of the macroscopic world. Despite around a century since its formal development, and of its exceptional success in explaining the microscopic physical world, several conceptual and fundamental aspects of quantum mechanics are still unclear and the subject of intense debate. These fundamental aspects are currently a very active research field, as well as the application of quantum mechanics in several and broad fields of science and technology. This Special Issue aims at presenting original and review articles on all of these extremely important and actual aspects of quantum mechanics, ranging from the most fundamental level to applications, as well as historical aspects.

Guest Editors

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