Special Issue

New Trends in Quantum Physics and Quantum Information

Message from the Guest Editors

As we approach one hundred years of quantum mechanics, there have been interesting new foundational and mathematical developments in the technological frontier of quantum information science. To name some examples, the exploration of the bridge between information theory and thermodynamics from nonequilibrium quantum aspects has drawn tremendous attention. These considerations are of particular interest in the context of black hole physics and gravitational wave physics. On the fundamental side, the incorporation of quantum reference frame transformation in the relativity principle has strong implications for quantum gravity. The Special Issue aims to promote exchanges on the general subject matter.

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The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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