Special Issue

Mathematics Methods in Quantum Physics and Its Applications

Message from the Guest Editor

The year 2025 has been designated the Quantum Year, marking 100 years of significant advances in quantum science and technology. Worldwide celebrations highlight the profound impact of quantum theory on modern physics and emerging technologies. However, this brilliant progress would not have been possible without the essential foundation provided by mathematics. Key tools such as linear algebra, functional analysis, group theory, operator algebras, differential geometry, and complex analysis have enabled breakthroughs and continue to drive innovation. To acknowledge this, we are launching this Special Issue to celebrate and further explore the deep connection between mathematics and quantum physics. This Special Issue invites high-quality submissions on developing, analyzing, and applying mathematical methods in quantum physics, including quantum computing and information theory. We aim to highlight theoretical insights and practical tools that enhance the understanding and control of quantum systems. We welcome original research, review papers, and methodological contributions from all areas of mathematical physics and quantum theory.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

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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