

Special Issue

Advances in Quantum Optics and Quantum Information

Message from the Guest Editor

The aim of this Special Issue is to publish original scientific articles devoted to theoretical advances in quantum optics and quantum information. Any theoretical results in these fields of physics involve various mathematical approaches and modeling using numerical calculations. Often in the literature on these areas of physics, mathematical details are omitted and not discussed in detail. In this issue, detailed discussion of such mathematical approaches and modeling details will be welcome. Publications on important physics results already known but using original mathematical ideas that have led to simpler and faster results may be considered in this issue. Topics of interest to this Special Issue include but are not limited to quantum communication and cryptography, quantum metrology and sensing, quantum modeling, quantum gates, quantum control, hybrid quantum circuits, quantum electrodynamics of resonators, optical cavities, mechanical systems, single photon sources and detectors, beam splitters, and waveguide lattices.

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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manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.3 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the second half of 2025).