Special Issue

Mathematical Analysis and Computation in Quantum Physics

Message from the Guest Editor

Mathematical analysis and computational techniques are vast areas of research in *Mathematics* and often form an important set of toolkits for physics, biology and science in general. Quantum physics, in all its branches and endless applications, benefits from advanced mathematical analysis in several respects. Pure number theory, complex analysis, differential equations, vector spaces and the like are essential in the quantum description of the world at the very small scale. In addition, new topics, such as cryptography and topology, are experiencing interesting cross-fertilization with the quantum world. Computation and advanced plotting are also essential tools for mathematical physicists in order to obtain and visualize new results; therefore, these two inextricable topics do complement each other nicely and are the subjects of the present Special Issue of *Mathematics*. The field is so vast and open that contributions ranging from pure analysis to pure computational aspects will be taken into consideration, as well as all sorts of applications in which new mathematical results apply to quantum physical phenomena.

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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