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Mathematical Aspects of Quantum Field Theory and Quantization

Guest Editor:

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Message from the Guest Editor

The aims of this Special Issue on the mathematical aspects of QFT and quantum mechanics are to present and highlight the most recent research developments in this topic. This Special Issue will specifically target mathematical methods and, more specifically, new solutions to differential equations and special functions of the Schrödinger, Klein–Gordon, Dirac and Proca equations. This differential equation list is not exhaustive. We also want to emphasize perturbations in QFT, the WKB method, more general second-order approximations and, more generally, quantum theories.

Indeed, there have recently been mathematical innovations in these areas, notably new classes of special functions that can be used very well for various approaches to quantum perturbations. We hope that the new contributions will also be able to interconnect with these same recent advances. In addition, we are also open to contributions regarding mathematical innovations in quantum gravity. This subject is interesting and in full development; this would complete this Special Issue well.









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Message from the Editor-in-Chief

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