

Special Issue

Quantum Field Theory

Message from the Guest Editor

Quantum field theory is a convincing framework to address a variety of subatomic processes, high-energy particle reactions, and the effective physics of condensed matter systems. In particular, quantum gauge theory has acquired a prominent status. This Special Issue aims to present the latest development in local quantum field theory, perturbatively and nonperturbatively and largely analytically describing systems of variable spacetime dimension $D = d + 1$ and signature as well as field content. Examples are nonperturbative and analytical approaches to gauge theory (semiclassical approximation, nonperturbative a priori estimates) and conformal field theory in $d = 1, 2, 3$ as well as approaches to quantum field theory that exploit a weak–strong coupling duality. We also welcome submissions discussing resummation schemes of small-coupling expansions, operator product expansions, numerical approaches such as lattice gauge theory, quantum field theoretic investigations on strongly curved spacetime backgrounds and at finite temperature, and the various approaches to quantum gravity.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

The multidisciplinary journal *Universe* is aiming to follow and, hopefully, to lead to the largest extent as possible the ever-self renovating threads which weave mathematical theories with our understanding of the magnificent natural world. On behalf of all the distinguished members of the Advisory and Editorial Boards, I extend my welcome to this journal and look forward to hearing from the interested contributors and learning about their valuable research.

Editor-in-Chief

Prof. Dr. Lorenzo Iorio
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