Special Issue

Chiral Quark Models and Their Applications

Message from the Guest Editors

This Special Issue, entitled *"Chiral Quark Models and Their Applications"*, is devoted to recent advances in effective approaches to low-energy Quantum Chromodynamics (QCD), with a particular focus on chiral symmetry and its role in the dynamics of strongly interacting matter. A variety of effective models—including the Nambu–Jona-Lasinio (NJL) model and its extensions, linear and nonlinear sigma models, quark–meson models, and Dyson–Schwinger approaches, among others—have proven essential for understanding spontaneous chiral symmetry breaking, meson properties, and the rich structure of the QCD phase diagram. We invite contributions that address theoretical developments, phenomenological applications, and comparisons with results from lattice QCD and experimental data. Topics of interest include, but are not limited to, the following: chiral symmetry breaking and restoration, hadron properties, QCD thermodynamics at finite temperature and density, phase transitions and critical phenomena, color superconductivity, the effects of external magnetic fields, and isospin–asymmetric matter...

Guest Editors

Dr. Ana Gabriela Grunfeld

Dr. Gustavo Contrera

Prof. Dr. David Alvarez Castillo

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Symmetry
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
symmetry@mdpi.com

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About the Journal

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

Editor-in-Chief

Prof. Dr. Sergei Odintsov
1. ICREA, 08010 Barcelona, Spain
2. Institute of Space Sciences (IEEC-CSIC), C. Can Magrans s/n, 08193 Barcelona, Spain

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