Special Issue

Computational Methods for Quantum Matter

Message from the Guest Editors

In recent years, remarkable experimental breakthroughs achieved with platforms such as atomic gases, trapped ions, and superconducting gubits have allowed for controlled realizations of various intriguing quantum phenomena. These experiments represent the ideal venue to test novel computational methods for quantum many-body systems. This Special Issue aims to showcase relevant computational studies on quantum matter, highlighting successful applications, recent algorithmic advancements, and also the main open challenges. Contributing authors are invited to elucidate physics insights provided by the employed computational techniques and/or to describe enabling technical developments. The further goals are also to provide the community with helpful information for future computational advancements and to bring the open challenges to be addressed by quantum manybody physicists in the near and the midterm future into the spotlight.

Guest Editors

Dr. Sebastiano Pilati

Prof. Dr. Bruno Julia-Diaz

Prof. Dr. Stefano Giorgini

Deadline for manuscript submissions closed (31 January 2022)



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About the Journal

Message from the Editor-in-Chief

Welcome to *Condensed Matter* (ISSN 2410-3896)! It gives me great pleasure to invite you to publish in the journal. We are looking to build a collection of high quality research articles, supported by a community from across the field of condensed matter physics. In this task, I will be assisted by a highly qualified editorial board. We accept papers on basic research as well as applications, and experimental or theoretical work. Currently the journal is indexed by ESCI (Web of Science) and hope you can consider *Condensed Matter* as an exceptional home for your manuscript.

Editor-in-Chief

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