

## Special Issue

# Fluctuations and Highly Non-linear Phenomena in Superfluids and Superconductors VIII

### Message from the Guest Editors

This Special Issue is dedicated to the proceedings of the conference SuperFluctuations 2024, which will be held in Salerno, Italy, from 16 to 18 September 2024 (<http://www.multisuper.org/superfluctuations-2024>).

This international conference will provide an excellent forum for the presentation and discussion of recent developments in the diverse fields of superconductivity and superfluidity. You are invited to submit a full manuscript for consideration and possible publication in this Special Issue, focusing on the following topics:

- Fluctuations and BCS-BEC crossover phenomena: multicomponent and low-dimensional systems.
- Spin-orbitronics: theory and applications.
- Novel quantum phenomena with Bosons and Fermions.
- Highly non-linear phenomena: Josephson and Andreev effects, topological defects, vortex states.
- Non-equilibrium superconductivity.
- Electron-hole and excitonic superfluidity and supersolidity: theory, numerical simulations, and experimental realizations.
- Innovative numerical methods: Machine Learning, its synergies with QMC, and applications.
- Quantum technologies and quantum devices/sensors based on novel superconducting/superfluid systems.

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### Guest Editors

Prof. Dr. Roberta Citro

Dr. Claudio Guarcello

Dr. Andrea Perali

Prof. Dr. Luca Dell'Anna

Prof. Dr. Luca Salasnich

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### Deadline for manuscript submissions

closed (31 January 2025)



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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.

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### Editor-in-Chief

Prof. Dr. Antonio Bianconi

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