



The Many-Worlds Interpretation of Quantum Mechanics

Guest Editor:

Prof. Dr. Lev Vaidman

Raymond and Beverly Sackler
School of Physics and
Astronomy, Tel Aviv University,
Tel Aviv 69978, Israel

Deadline for manuscript
submissions:

closed (31 March 2023)

Message from the Guest Editor

Dear Colleagues,

The many-worlds interpretation of quantum mechanics (MWI) solves the measurement problem, avoids action at a distance and indeterminism, and does not contradict empirical evidence. Why, then, it is not in the consensus? This Special Issue will aim to promote the ongoing debate on the foundations of quantum mechanics by dealing with the major open questions regarding the MWI and its alternatives.

The issues to be discussed include:

- What is the ontology?
- Who am I, what is our world?
- What is the structure of the physical universe?
- Does self-location uncertainty solve the probability problem?
- Can the Born rule be derived?
- What are advantages of alternative interpretations?
- Do we need to modify the MWI of QM in view of field theory, string theory, etc.?

Prof. Dr. Lev Vaidman
Guest Editor





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Lev Vaidman

Raymond and Beverly Sackler
School of Physics and
Astronomy, Tel Aviv University,
Tel Aviv 69978, Israel

Message from the Editor-in-Chief

We get more and more evidence that quantum theory is the correct description of nature. It was born a century ago by explaining a few paradoxical results that could not be understood in the framework of classical physics. Today, quantum physics leads technological revolution in metrology, communication, computation, and the design of novel materials. Still it needs more solid foundations, and we need to develop a deeper understanding of how it can be used for new applications.

Quantum Reports is an online, open-access journal providing an advanced forum for clarifying foundations of quantum theory and developing its applications in all fields of physics and technology. *Quantum Reports* is inviting innovative and insightful contributions from the growing community of researchers of quantum science.

Author Benefits

Open Access: free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

High Visibility: indexed within [Scopus](#) and [other databases](#).

Journal Rank: CiteScore - Q2 (*Physics and Astronomy (miscellaneous)*)

Contact Us

Quantum Reports Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/quantumrep
quantr@mdpi.com