

## Special Issue

# The Logical Foundations of Quantum Physics and AI: A Philosophical Reflection on Formal Methods

### Message from the Guest Editors

In this Special Issue of *Philosophies*, we invite contributions exploring the philosophy of quantum physics, the philosophy of AI, and the meta-philosophical theory of "Logical Permeationism." We seek to construct a unified theoretical dialog that integrates the rigor of formal logic with normative ethical concerns. Topics of interest include the following:

- **In Commemoration of the Ideas and Contributions of Professor Chen-Ning Yang:** Reflections on the philosophical implications of Professor Yang's groundbreaking contributions and their enduring impact on the philosophy of science, marking the significance of the "Quantum Centenary.
- **Fundamentals and Philosophical Issues in Quantum Physics:** Ontological and epistemological analyses of core concepts.
- **Frontier Philosophical Issues in Quantum Information Technology:** Explorations of how quantum computing and algorithms reshape our understanding of information, complexity, and the Church-Turing thesis.
- **Logical Permeationism:** Investigating the meta-philosophical position of "Logical Permeationism"—whether unified logical principles can permeate across the distinct domains of physics, biology, and AI.

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### Guest Editors

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### Deadline for manuscript submissions

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## Philosophies

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## About the Journal

### Message from the Editor-in-Chief

*Philosophies* searches for the syntheses of philosophical and scientific inquiries. It promotes philosophical work that is derived from the experience of diverse scientific disciplines and cultures. Multiple philosophies already exist— those of logic, information, computation, natural and artificial life, natural or artificial intelligence, complexity, technology, etc. Our mission is not to abandon philosophical roots and traditions of inquiry, but to promote the development of philosophical foundations and effective methodologies derived from diverse scientific explorations, and intended to enhance these explorations as to generate deeper and more holistic knowledge. Innovation may also be achieved through the cultural dimension. Other cultures can offer from their heritage a diversity of resources for exploration; these resources can also contribute to the emergent synthesis of philosophical inquiry.

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### Editor-in-Chief

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