



## Advances in Quantum Artificial Intelligence and Machine Learning

Guest Editors:

**Prof. Dr. Andreas (Andrzej)  
Wichert**

Department of Computer Science  
and Engineering (DEI), Technical  
University of Lisbon, 2744-016  
Porto Salvo, Portugal

**Prof. Dr. Moret-Bonillo Vicente**

Centre for Information and  
Communications Technology  
Research, Department of  
Computer Science and  
Information Technologies,  
University of A Coruña, 15071 A  
Coruña, Spain

**Prof. Dr. Antonio Chella**

RoboticsLab, Dipartimento di  
Ingegneria, Università degli Studi  
di Palermo, Viale delle Scienze  
ed. 6 - 90128 Palermo, Italy

Deadline for manuscript  
submissions:

**closed (30 November 2022)**



### Message from the Guest Editors

Dear Colleagues,

The use quantum coprocessors for extensive and non tractable computation routines in AI will lead to new machine learning and artificial intelligence applications.

Linear algebra-based quantum machine learning is based on quantum gates that describe quantum basic linear algebra subroutines. These subroutines exhibit theoretical exponential speedups compared to classical counterparts and are essential for machine learning. Quantum annealing solves optimization problems.

Quantum-Inspired machine learning and AI algorithms are based on mathematical quantum theory to model the algorithms.

Quantum cognition uses a mathematical quantum theory to model cognitive phenomena.

clues from psychology indicate that human cognition is not only based on traditional probability theory as explained by Kolmogorov's axioms but additionally on quantum probability.

Submissions may include original research articles or comprehensive reviews related to the topic.

Prof. Dr. Andreas (Andrzej) Wichert

Prof. Dr. Moret-Bonillo Vicente

Prof. Dr. Antonio Chella

*Guest Editors*



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**Prof. Dr. Francisco Chiclana**  
School of Computer Science and  
Informatics, De Montfort  
University, The Gateway,  
Leicester LE1 9BH, UK

## Message from the Editor-in-Chief

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*Mathematics* Editorial Office  
MDPI, Grosspeteranlage 5  
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