

# International Symposium on Quantum Sciences: Applications and Challenges

## Call for papers: QSAC' 2023

September 24-25, 2023, Algiers, Algeria



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### Keynote speakers

A. Aspect, Paris-Saclay University, France  
M. Bourenane, Stockholm University, Sweden  
T. Ebbesen, University of Strasbourg, France  
K. Elleithy, Bridgeport University, Connecticut, USA  
A. Mokrane, Paris 8 University, France

### Scope

After artificial intelligence, quantum computing will usher in a greater technological revolution. Its impact will upset our society in such a short time and may disrupt the rhythm of human life. The intended goal of quantum computing is a dizzying acceleration in the computing speed of computers and the programming inherent in it. Quantum computing relies on quantum mechanics/physics laws to solve problems too complex for classical computers. It is concerned with hardware and software just like classical computing. Therefore, It revolves around the design of quantum computers and the development of quantum algorithms.

### Objectives

The QSAC'2023 symposium aims to be an event to introduce in preview the main concepts and techniques of quantum sciences including quantum computing, quantum mechanics/physics, and quantum chemistry as well as their applications. QSAC'2023 will offer an exceptional opportunity for researchers, students, startups, entrepreneurs, and industrials to meet around this new science, learn about its concepts and prepare to understand the future with its cutting-edge tools. They will also discuss with eminent scientists who will be invited to lead conferences in the field. Just like artificial intelligence, quantum sciences hold great promise in terms of human life quality. They offer applications in many fields such as artificial intelligence, machine learning, deep learning, computational chemistry, materials science, drug development, bioinformatics, cybersecurity, optimization of logistics, weather forecasting, soil mapping, and agriculture. If the applications of quantum are numerous and varied, the challenges posed to it are considerable. They will be discussed as well as the dangers of the quantum era during this exciting event.

### Topics

The QSAC'2023 topics are but not limited to:

- Quantum physics/ Quantum chemistry
  - Fundamentals of quantum computing
  - Thermodynamics of quantum computing
- Quantum hardware
  - Quantum computers architecture
  - Quantum Annealers
  - Analog quantum computers
  - Universal quantum computers
- Quantum software
  - Quantum algorithms and complexity
  - Error-Free Quantum Computing
  - Quantum programming

### Applications

- Artificial intelligence
- Machine and deep learning
- Computer vision
- Natural Language Processing
- Multi-agent systems and Robotics
- Computational chemistry
- Medicine
- Material science
- Drug development and bioinformatics
- Cybersecurity and cryptography
- Logistics optimization and Metaheuristics
- Weather forecasting and environment science
- Soil mapping and agriculture technologies
- Earth Sciences

### Important dates

**Paper submission deadline (extended)**

**August 01, 2023 August 08, 2023**

**Acceptance notification**

**August 25, 2023**

**Camera-ready paper due**

**September 01, 2023**

**Conference date**

**September 24-25, 2023**

### Symposium location

**CIC Alger, Club des Pins, Staoueli,  
Algiers, Algeria**



### Organizer



### Contact us



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<https://www.aast.dz/wp-content/uploads/2023/QSAC>



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### Submission

- ✓ Prospective authors are invited to submit their papers in English, using the Springer **CCIS** (Communications in Computer and Information Science) formatting guidelines. Full articles should be 12-15 pages, and short articles 6-11 pages.
- ✓ Papers must be submitted through the **EasyChair** submission system. To submit, please log in to your easyChair account and then click on <https://easychair.org/my/conference?conf=qsac2023>.
- ✓ Extension of selected articles will be submitted for publication in **national**, **WOS**, and **Scopus** journals.



**The registration is free of charge**

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