

International Symposium on Quantum Sciences: Applications and Challenges

Call for papers: QSAC' 2023

September 24-25, 2023, Algiers, Algeria



Steering committee

M. Allab, AAST, Algiers, Algeria
H. Drias, AAST & USTHB, Algiers, Algeria
A. Bousseksou, AAST & LCC-CNRS, Toulouse, France
A. Tadjeddine, AAST & Paris-Saclay University, France
A. Belouchrani, AAST & ENP, Algiers, Algeria
F. Yalaoui, AAST & UTT Troyes, France

General chair

H. Drias, AAST & USTHB

Local organizing committee

S. Amara, AAST
F. Souami, Algiers University
A. Baouche, AAST
N. Fouial, AAST

Publicity committee

L.S. Bendimerad, LRIA USTHB
N. Mebtouche, LRIA USTHB

Accommodation committee

M. Amirèche, AAST
A. Chikhi, AAST
Y. Samar, AAST
C. Khelfa, LRIA USTHB
A. Amirat, LRIA USTHB

Publication committee

N.A. Houacine, LRIA USTHB
W.H. Belkadi, LRIA USTHB

Website designer

L. Abada, LRIA USTHB

Program committee chairs

L. Abada, LRIA USTHB
Y. Drias, Algiers University & LRIA USTHB
I. Khennak, LRIA USTHB
N.A. Houacine, LRIA USTHB

International Program committee

L. Abada, USTHB, Algiers, Algeria
A. Azzoune, EMP Algiers, Algeria
T. Arbaoui, UTT LIST3N, Troyes, France
K. Barkaoui, CNAM Paris, France
A. Belkhir, USTHB Algiers, Algeria
A. Belouchrani, ENP Algiers, Algeria
D. Boughaci, USTHB Algiers, Algeria
M. Bourennane, Stockholm University, Sweden
A. Bousseksou, LCC-CNRS Toulouse, France
C. Couteau, UTT-CNRS Troyes, France
H. Drias, USTHB Algiers, Algeria
Y. Drias, University of Algiers, Algeria
K. Elleithy, Bridgeport University, Connecticut, USA
A. Got, USTHB Algiers, Algeria
M. Hachemane, USTHB Algiers, Algeria
F. Hnaein, UTT Troyes, France
N. Kamel, Setif University, Algeria
S. Kechid, USTHB Algiers, Algeria
I. Khennak, USTHB Algiers, Algeria
M. Maamache, Setif University, Algeria
M. Mezghiche, Boumerdes University, Algeria
A. Mokrane, Paris 8 University, France
K. Ourabah, USTHB Algiers, Algeria
C. Prodhon, UTT LIST3N, Troyes, France
Y. Saad, University of Minnesota, USA
M. Soltane, Médéa University, Algeria
A. Tadjeddine, Paris-Saclay University, France
F. Yalaoui, UTT Troyes, France
D. Zouache, Bordj-Bouaredj University, Algeria
...

Keynote speakers

A. Aspect, Paris-Saclay University, France
M. Bourenane, Stockholm University, Sweden
T. Ebbsen, 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

August 01, 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,
Alger, Algérie.



Organizer



Contact us



QSAC23@aast.dz
QSAC23@gmail.com;



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



Laboratoire de Recherche en
Intelligence Artificielle (LRIA)



(+213)559 90 20 29
(+213)795 14 56 98
(+213)559 93 31 97

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 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

With the collaboration of:

