QUEST-IS'27

QUANTUM **E**NGINEERING **S**CIENCES & **T**ECHNOLOGIES FOR **I**NDUSTRY & **S**ERVICES

CALL FOR PAPERS

6th to 10th December - EDF R&D Paris Saclay

From Quantum Engineering to Applications for Citizens

KEY DATES

- Opening of Call for Papers: **Beginning November 2026**
- Full paper submission via ConfTool **April 5th 2027**
- Notification of acceptance **July 5th 2027**
- Upload the Camera-ready* paper by : **September 13th 2027**

*with ConfTool for authors, chairs and reviewer!

SCOPE

After the success of QUEST-IS'25 : 250 participants, 79 papers, 2,7 reviewers per paper , 6 tutorials, 9 sponsors, 17 exhibitors, QUEST-IS'27, 2nd International Quantum Engineering conference and exhibition will gather many companies in the quantum ecosystem from various countries

It gives thus ways to technical matters as quantum computing and algorithms, quantum sensors, quantum communications, crypto and internet, including enabling technologies, and obviously Quantum Engineering targeting Applications for Citizens

Additionnaly new matters to the 1st session shall be also addressed

- Quantum Metrology to support development and Engineering of Quantum technologies
- Air Traffic Management (JU SESAR, Eurocontrol)
- Aeronautics and space (ESA and CNES)
- Economics for engineering (EDHEC Quantum Institute)
- Connecting Engineering and Science (Quantum Energy initiative)
- European Quantum Act and update of international Quantum strategies
- AI for Quantum Engineering

This multidisciplinary event place lets attendees from various backgrounds discuss technical challenges of applied quantum technologies and business opportunities with each other.

TECHNICAL VISITS

Technical visits and other events will be proposed during the conference

ABSTRACT SUBMISSION

Prospective authors are invited to submit a full paper submission before April 26th 2027. Simply scan the QR code, or go to: www.conference-questis.org

EXHIBITION/SPONSORS

To complement the conference an exhibition will be organized during QUEST-IS 2027 at the same venue. This will enable attendees to get useful contacts as well as illustrate the wide variety of quantic developments.

It also includes booths where industries, service providers and labs can show their last developments and innovations; this exhibit area facilitates discussions between experts from various fields

CO-OPERATING SOCIETIES

Fédération Française de Sociétés Scientifiques
SEE · SFO · SFP · SFV

Simply scan the QR code, or go to
www.conference-questis.org

Where?
EDF R&D
(Paris Saclay Campus)
7 Boulevard Gaspard Monge
91120 Palaiseau

Contact
QUEST-IS 2027/SEE Office
congres@see.asso.fr
General Chairs
François GERIN (SEE)
Frédéric BARBARESCO (THALES & SEE)
Organizing & Scientific Committee
see QUEST-IS site

Organizer

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CONFERENCE TOPICS / TUTORIALS

Topics to be covered include (but are not confined to):

❱ Quantum Algorithms, Computing & Simulation

- Quantum Algorithms HW-dependent Optimization
- HW Agnostic Quantum Circuits Representation & Optimization
- Data Loading
- Time synchronization
- Quantum Error Correction Codes to Reduce Physical Qubits/Logical Qubits Ratio
- Resources Estimation
- Quantum Middleware & Abstract Framework based on basic components
- Quantum Simulation
- Quantum Parallel Algorithms
- QPU/HPC and Classical algo/ Quantum algo Hybridization
- Quantum program specification and formal verification environment
- Advances in Qubits Emulation
- Applications-Oriented Benchmarks for Quantum Computing
- Quantum Machine Learning Design & Applications
- Lie Algebra-Based Quantum Algorithms & Quantum Geometry- Informed Machine Learning
- From Classical Problems to Quantum Algorithms Methodologies and Tools
- Quantum Cryptanalysis Engineering

❱ Enabling Technologies

- Cryogenic systems for 1000+ qubits accomodation
- Advanced Cryo-Electronics Engineering
- Cabling and connectors miniaturization
- Interconnection-based scalability
- Room temperature control electronics scalability
- Overcoming the power limitation of laser source
- Light control qubits: from optical fibers to optoelectronic efficiency
- Quantum photonics
- Possible improvement from the material perspective and qubit fabrication
- Signal processing/multiplexing and error corrections
- The feasibility of qubit characterization
- Environmental perturbations and their mitigation
- Multi-modularity qubits hybridization

❱ Quantum Sensors

- Position navigation and timing, including optical clocks, gravimeters and inertial sensors .
- Quantum entanglement as a ressource for quantum metrology
- Quantum imaging and spectroscopy
- Magnetometry and related applications
- Quantum sensing and analysis of RF fields
- Quantum technologies for medical applications
- Future prospects in quantum sensing

❱ Quantum Communications

- Quantum information network
- Progress in QKD
- Post-quantum cryptography/ QKD hybridation
- New quantum communication protocols and their uses
- Toward integration sources, detectors, new propagation media
- Quantum memories and repeaters - all hardware platforms
- Demonstrators: terrestrial & space - projects and results/field trials
- Governmental Agency views on quantum communications

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Organizer
see since 1883