Ministry of Higher Education and Scientific Research

Ferhat Abbas Setif 1 University

Thematic Network for Quantum Computing

Sétif 1, Boumerdes, Constantine 2, Jijel, Biskra, Béjaia

وزارة التعليــم العالــي والبحث العلمــي

جـامعة فرحـات عبــاس سطيـف 1

الشبكة الموضوعاتيـة للإعلام الآلي الكمي

سطيف1, بومرداس,قسنطينة 2, جيجل, بسكرة, بجاية

Master Quantum Computing   ماستر الإعلام الآلي الكمي

Objectives

This Master's program offers comprehensive training in Quantum Computing, enabling students to understand fundamental concepts such as superposition, entanglement, quantum gates, algorithms, and error correction. Students will also master quantum programming, using specialized languages and frameworks to translate classical problems into quantum algorithms and optimize them. By exploring quantum hardware, students will gain hands-on experience with various technologies, including superconducting qubits. Additionally, the program covers various quantum applications, including cryptography, optimization, machine learning, and general chemical simulations, while preparing students for rewarding careers in the field of quantum computing, including scientific research in : software engineering, algorithm design, information theory, and consulting methods.

Admission

Who will be admitted to the Master Quantum Computing?

Graduate students have a license's degree in Computer Science.

Submit your application online

https://insc.univ-setif.dz

Want to be …

✓ **R&D Scientist**: These experts advance quantum computing through research, demanding knowledge of quantum mechanics, algorithms, programming languages, and experimental prowess.

✓ **Quantum Software Expert**: These expert develop quantum-powered software, requiring fluency in quantum programming, software development, algorithm optimization, and integration with classical systems.

✓ **Quantum Hardware Expert**: Specialists in hardware design need expertise in quantum hardware architectures, electronics, quantum control, and low-temperature physics to build quantum computing components.

✓ **Quantum Security Expert**: These professionals protect data in a world, necessitating proficiency in both classical and quantum cryptography, along with an understanding of quantum computing's impact on encryption.