Egypt Quantum Computing Community (EgQCC)

Building Egypt's Quantum Future

About EgQCC

The **Egypt Quantum Computing Community (EgQCC)** is Egypt's leading volunteer-driven initiative dedicated to advancing quantum computing education, research, and innovation. Established ian partnership with international organizations, EgQCC has built a comprehensive ecosystem that connects students, researchers, and industry professionals across Egypt and beyond.

Our Mission

To democratize quantum computing education in Egypt and prepare the next generation for the quantum revolution through world-class training, certifications, and hands-on experience.

Our Vision

To position Egypt at the forefront of the quantum computing revolution in the MENA region, empowering Egyptian youth with cutting-edge skills and creating bridges between academia, industry, and international quantum initiatives.

Leadership Team

Main Leadership

Taha Selim

Lead, Egypt Quantum Computing Community

- Lecturer & Researcher, Amsterdam University of Applied Sciences
- General Director, MolKet SAS

Asmaa Saafan

Co-Lead & Director, Directorate of Education

- Associate Professor, National Telecommunication Institute (NTI)

Community Composition

Our diverse community includes:

- **Academic Researchers and Professors** from leading Egyptian institutions
- **Industry Engineers** from IBM Quantum and leading tech companies
- **International Collaborators** from global quantum organizations
- **AI & Quantum Computing Specialists** with advanced degrees
- **University Students** passionate about emerging technologies

Major Achievements

Since our establishment, EgQCC has accomplished:

National Events

- **Egypt's First National Quantum Computing Hackathon** hosted at Bibliotheca Alexandrina with IBM support
- **Seasonal Schools:** Quantum Summer School and Winter School programs
- **Monthly Lecture Series** featuring local and international experts

Educational Programs

- **Internationally Recognized Certifications:** Partnered with OQI and QWorld to deliver QBronze and QNickel certifications
- **Weekly Quantum AI Lab Sessions:** Hands-on experience connecting quantum computing and AI projects
- **Comprehensive Training Programs** using industry-standard platforms

Strategic Partnerships

- **Bibliotheca Alexandrina (BA)** - Cultural and Educational Partner
- **OQI (Open Quantum Institute)** - International Education Partner
- **QWorld** - Global Quantum Education Network
- **QBraid** - Leading US-based Quantum Computing Platform
- **IBM Quantum** - Technology Vendor and Platform Provider **iQafé** -
- Educational Platform Partner

Programs & Activities

Regular Activities

Weekly Sessions:

- Quantum AI Laboratory with practical projects
- Study groups and discussion forums
- Project-based learning teams

Monthly Programs:

- Guest lectures from industry experts
- Workshop series (Qiskit, Pennylane, QBraid)
- Community meetups and networking events

Seasonal Programs

Summer School (June-July)

- Intensive quantum computing bootcamp
- Advanced programming workshops
- Research project development
- Team-based challenges

Winter School (January)

- Fundamentals of quantum computing
- Quantum algorithms and machine learning
- Quantum simulations and applications
- Industry expert lectures
- Certification opportunities

Competitions & Hackathons

- **National Quantum Computing Hackathon** - Annual flagship event
- **Dry-run Hackathons** - Practice events for skill development
- **Quantum Games Championship** - Inter-university competitions
- **Team-based Quantum Challenges** - Collaborative problem-solving

Research & Innovation

- Applied research projects addressing national challenges
- Collaboration opportunities with faculty and experts
- Alignment with UN Sustainable Development Goals
- Industry problem-solving initiatives
- Support for publication and project development

Educational Tracks

Track 1: Quantum Machine Learning and AI

- Quantum computing fundamentals AI & Machine
- Learning foundations Quantum Machine Learning
- techniques
- Quantum-AI convergence concepts
- Hands-on programming with Qiskit & Pennylane

Track 2: Quantum Simulations

- Molecular simulations and quantum chemistry
- Material design applications
- Engineering design with quantum computing
- Optimization problems
- Real-world quantum applications

University Chapter Program

EgQCC is expanding through a **University Chapter Program** to bring quantum computing education directly to campuses across Egypt. Each chapter serves as a local hub for quantum learning, research, and innovation.

Chapter Benefits

For Students:

- Access to world-class training and certifications
- Hands-on experience with IBM Quantum, QBraid, and other platforms
- Networking with professors, researchers, and industry professionals
- Participation in national hackathons and competitions
- Research opportunities in cutting-edge quantum applications

For Universities:

- Leadership in Egypt's quantum computing landscape
- Enhanced institutional reputation in emerging technologies
- Access to international partnerships and resources
- Student engagement in high-impact scientific activities
- Support for faculty development in quantum technologies

For Chapter Leaders:

- Official recognition as EgQCC Chapter Lead
- Comprehensive training and mentorship
- Access to teaching materials and resources
- Networking opportunities across Egypt and internationally
- Leadership certificates and career development

Platforms & Tools

Members gain access to industry-leading platforms:

- **IBM Quantum** - Access to real quantum computers
- **QBraid** - Cloud-based quantum computing platform
- **Qiskit** - IBM's open-source quantum development framework
- **Pennylane** - Quantum machine learning library
- **QWorld** - Educational resources and certifications

Get Involved

For Students

Join your university's EgQCC chapter or participate in our national programs and events.

For Universities

Establish an EgQCC chapter on your campus and bring quantum computing education to your students.

Join the Quantum Revolution

Quantum computing is not just the future—it's happening now. Be part of the movement that's shaping the future of computing in Egypt and preparing the next generation of quantum leaders.

Together, we can build Egypt's quantum future.

Egypt Quantum Computing Community (EgQCC) - A volunteer-driven initiative empowering Egyptian youth with quantum computing education and skills.