ICTP | International Centre for Theoretical Physics
SAIFR | South American Institute for Fundamental Research

Campus of IFT-UNESP - São Paulo, Brasil

November 14-25, 2022

SCHOOL ON QUANTUM COMPUTATION

Seminar Speaker
ENRIQUE SOLANO
University of the Basque Country, Spain/CEO QUANVIA e KIPU QUANTUM

Minicourse
EDUARDO DUZZIONI
UFSC, Brazil
Quantum algorithms: from basics to differential equations

Seminar Speaker
FELIPE F. FANCHINI
UNESP Bauru, Brazil

Minicourse
ASKERY CANABARRO
URFN, Brazil
Quantum Finance

Seminar Speaker
RAFAEL CHAVES
IPP/UFRN, Brazil

Minicourse
THOMAS MONZ
University Innsbruck, Austria
Trapped Ion Quantum Computers

Minicourse
FRANCISCO ROUXINOL
UNICAMP, Brazil
Superconducting Qubits

Minicourse
MARKUS MÜLLER*
Forschungszentrum Jülich, Germany
Quantum error correction

Quantum computing has become a major hot topic in recent years, leading several countries around the world to launch billion-dollar initiatives to develop research in this area. In addition to such initiatives, large multinational corporations such as Google, IBM, Amazon, Microsoft and many new startups have also started to invest large amounts of money both in the construction of quantum computers and new algorithms, which explore the fundamental concepts of Quantum Theory to promise extraordinary gains in information processing even over the most powerful classical supercomputers.

The main purpose of the present school is to provide short courses and lectures from the basics concepts to the state of the art on quantum computing: quantum algorithm efficiency, quantum complexity theory, quantum simulators, adiabatic quantum computing, quantum machine learning, and different architectures where quantum computing can be implemented, such as superconducting qubits, trapped ions, and photonics systems. The school will also offer short courses about the use of quantum computing in the cloud.

There is no registration fee and limited funds are available for travel and local expenses.
**to be confirmed*

Application deadline: September 11, 2022

Online application and more information:
www.ictp-saifr.org/qc2022/

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