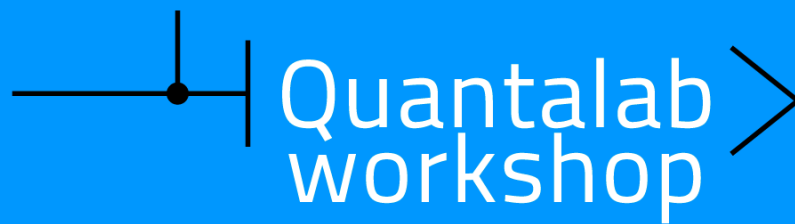


IBM Research



WORKSHOP ON QUANTUM COMPUTING
23th-24th October | 2018 | Braga, Portugal

IBM-QuantaLab School on Quantum Computing 2018

1. About this course

Next October 23 and 24 (2018) we shall have the first Quantum Computing School at INL, organized by IBM Research and QuantaLab, and sponsored by Nanogateway. The IBM-QuantaLab School aims to provide both an overview to the current status of quantum computation as well as potential for applications of quantum computing. The program of the School includes the participation of 6 researchers from IBM Zurich, one of the world leading institutions in the fabrication of the first commercially available quantum computers, and several experts on different areas of Quantum Information, Condensed Matter Physics and Computer Science.

The scope of the school will be to provide an Introduction into Quantum Computing.

1.1 OBJECTIVES

The main objectives of the School will be:

- To provide an introductory description of the main notions and huge potential of quantum computing, as well as some basic notions on the hardware of IBM quantum computers. (Day 1)
- To provide a hands-on technical training, using the **IBM Quantum Experience** hardware (Day 2)

1.2 METHODOLOGY:

- Day 1, October 23rd: The School will be devoted to lectures of a pool experts in Quantum Computing and/or related areas with potential applications for this new technology. The School will benefit Master student, PhD students, and researchers in general, in the areas of Physics, Computer Science and related areas.
- Day 2, October, 24th: There will be practical hands-on sessions using remote on-line access to the IBM quantum computers, using the **IBM Quantum Experience** website.

1.3 LIST OF SPEAKERS

The List of Speakers can be checked on this [link](#).

1.4 SCIENTIFIC COMMITTEE

The Scientific Committee can be checked on this [link](#).

1.5 PROGRAMME

The Programme can be checked on this [link](#).

2. Admission Criteria

Students coming from Master or PhD programs in Physics, Maths, Computer Science, among others. Also other professionals related to HPC, computing and information. Participants should have basic knowledge of quantum information.

It will be admitted a maximum of 50 participants on day 1, and 10 participants on day 2. The selection of the applicants will be based on the following criteria:

- 1) Academic Degree
- 2) Previous Knowledge
- 3) Academic CV
- 4) Motivation Text (240 characters maximum)
- 5) Geographic area (Poctep area)

3. Who can apply/ register

Participation is free of charge. However, the participation in the workshop has to be requested in the REGISTRATION FORM ([link](#)). Before the Deadline of **October 5th**. The acceptance of applications will be notified on **October 15th**.

Number of participants: **50 maximum day 1 | 10 maximum day 2**

Cost: **free** | Deadline: **5th October 2018**

4. Evaluation

Candidates will be selected through an evaluation of the registration form submitted. The selection of the applicants will be based on the following criteria: Academic Degree, previous knowledge, Academic CV, motivation, geographic area (POCTEP area)

- 1) Degree in Physics, Computer Science or related areas
- 2) Basic knowledge of quantum information
- 3) Academic CV
- 4) Motivation text (240 characters maximum)
- 5) Priority will be given to participants studying or working at Institutions from POCTEP Area

5. Areas POCTEP

5.1 Spanish Provinces:

Ourense, Pontevedra, Zamora, Salamanca, Cáceres, Badajoz, Huelva, A Coruña, Lugo, Ávila, León, Valladolid, Cádiz, Córdoba and Sevilla.

5.2 Portuguese Regions:

Alto Minho, Cávado, Trás-os-Montes, Douro, Beiras e Serra de Estela, Beira Baixa, Alto Alentejo, Alentejo Central, Baixo Alentejo, Algarve, Ave, Alto Tâmega, Tâmega e Sousa, Área Metropolitana do Porto, Viseu Dão-Lafões, Região de Coimbra, Médio Tejo, Região de Aveiro, Região de Leiria, Oeste and Alentejo Litoral.