2017 PhD. Program
Quantum engineering
In Grenoble

Quantum engineering is a novel domain of research, built on fundamental research carried out in the last 20 years all over the world. Quantum technologies offer radically new materials and devices for the next century, in sectors such as security, energy, communications, or healthcare. To transform such disruptive scientific concepts into real life benefits it is crucial to develop research aiming at higher technology readiness levels. To ensure that Europe takes the leadership in this coming quantum revolution, we must train next generation quantum engineers, by offering doctoral training in interconnected domains with the highest scientific standards, while equally providing an opening to the industrial world.

Grenoble is world renowned for its fundamental research institutes in condensed matter physics, nanosciences, computer sciences & mathematics as well as its high-tech innovative companies ranging from local start-ups to multinational groups. Grenoble area hosts 25 000 academic and industrial researchers, and more than 60 000 students. Grenoble's ecosystem is ranked within the top 5 innovative cities in nanotechnologies worldwide and 1st in Europe.

Grenoble Quantum Engineering (GreQuE) novel Doctoral Programme will grant 25 PhD projects hosted in Grenoble research institutes in which each student will benefit from a 2 to 6 months placement in a European company. 17 SMEs & large groups in 5 countries have committed to offer such placement to our students in accordance with their PhD project.

The topics include experimental and theoretical aspects of:

- **Nanoelectronics,**
- **Superconductive Qubits,**
- **Spintronics,**
- **Photonics,**
- **Computer science.**

How to apply:
GreQuE Doctoral Program is funded by the European Community under the Marie Slodowska-Curie Actions (MSCA). Applicants must fulfill the MSCA mobility criteria: No nationality conditions, but applicants must not have spent more than one year in France during the last three years.

Salary: 1758 €/month before taxes during three years.

Candidates are invited to visit the GreQuE webpage dedicated to the "PhD Program": http://www.grenoble-lanef.fr/spip.php?article171 and to contact us at: greque@neel.cnrs.fr

Deadline to submit your application: 2017, April 10, 11:59 am (CET)

The 2017 call of the PhD programs is enlarged with three other funding possibilities which bear particularities. You must take note of them.

- ➔ PhD program Fondation Nanosciences
- ➔ PhD program LANEF
- ➔ PhD program QuEnG

QuEnG PhD. Program 2017

Call for Application

Interdisciplinary PhD program "Quantum Engineering Grenoble"

We invite outstanding candidates to apply for our three-year interdisciplinary PhD program "Quantum Engineering Grenoble" (QuEnG). The QuEnG program aims to foster a local ecosystem for quantum technologies, building on the unique concentration of expertises, know-how, and resources of Grenoble area. The targeted ecosystem will connect various areas of knowledge, from science to humanities and entrepreneurship. The students of the program will work together to address current challenges of quantum technologies, at the interface between physics, computer science, mathematics, industry, philosophy and social science. They will contribute to the creation, the development and the animation of the ecosystem through actions supported by Grenoble-Alpes University. The QuEnG program provides a unique opportunity to develop a network both in the private and in the academic sector, and to become one of the future quantum engineers.

Description

10 PhD scholarships will be attributed on the following topics:

- **Quantum hardware:** up to 3 scholarships (Interface Physics/Computer Science and/or industrial coaching)
- **Quantum software:** up to 2 scholarships (Interface Computer Science/Physics)
- **Qubit/photon interface:** up to 1 scholarship (Interface Physics/Mathematics and/or with industrial coaching)
- **Quantum sensing:** up to 1 scholarship (Physics with industrial coaching)
- **Quantum energetics:** up to 2 scholarships (Interface Physics/Mathematics, and/or with industrial coaching)
- **Societal and philosophical aspects of quantum theory and quantum technologies:** up to 2 scholarships (Philosophy of Physics or Social sciences embarked in a Physics laboratory)

Salary

- From 1769 euros/month (without teaching) to 2100 euros/month (with teaching) before taxes
- Research grants ranging from 5 k€ to 40 k€

The applicants

They have to meet the following main criteria:

- Outstanding or excellent Master's degree or equivalent qualification
- Capacity or good previous knowledge in Quantum Computing, Quantum Technology, Philosophy or Sociology of Science, Mathematics
- Outstanding references

Submission deadline: April 10, 2017, 11:59 am CET

For more information visit**:** http://www.grenoble-lanef.fr/spip.php?article164

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- PhD program Fondation Nanosciences
- PhD program LANEF
- PhD program GreQue

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