

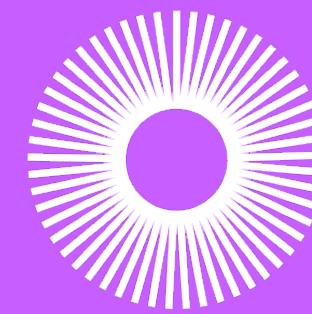
Master's Degree in
Quantum Technologies

Quantum Technologies

Jornadas de presentación de Másteres - Ciencias Unizar

David Zueco (CSIC) dzueco@unizar.es

qtep.csic.es/master-quantum-tech



Master's Degree in
Quantum Technologies

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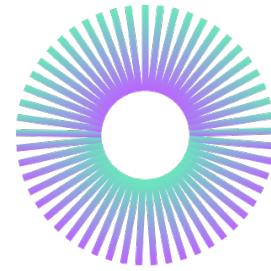
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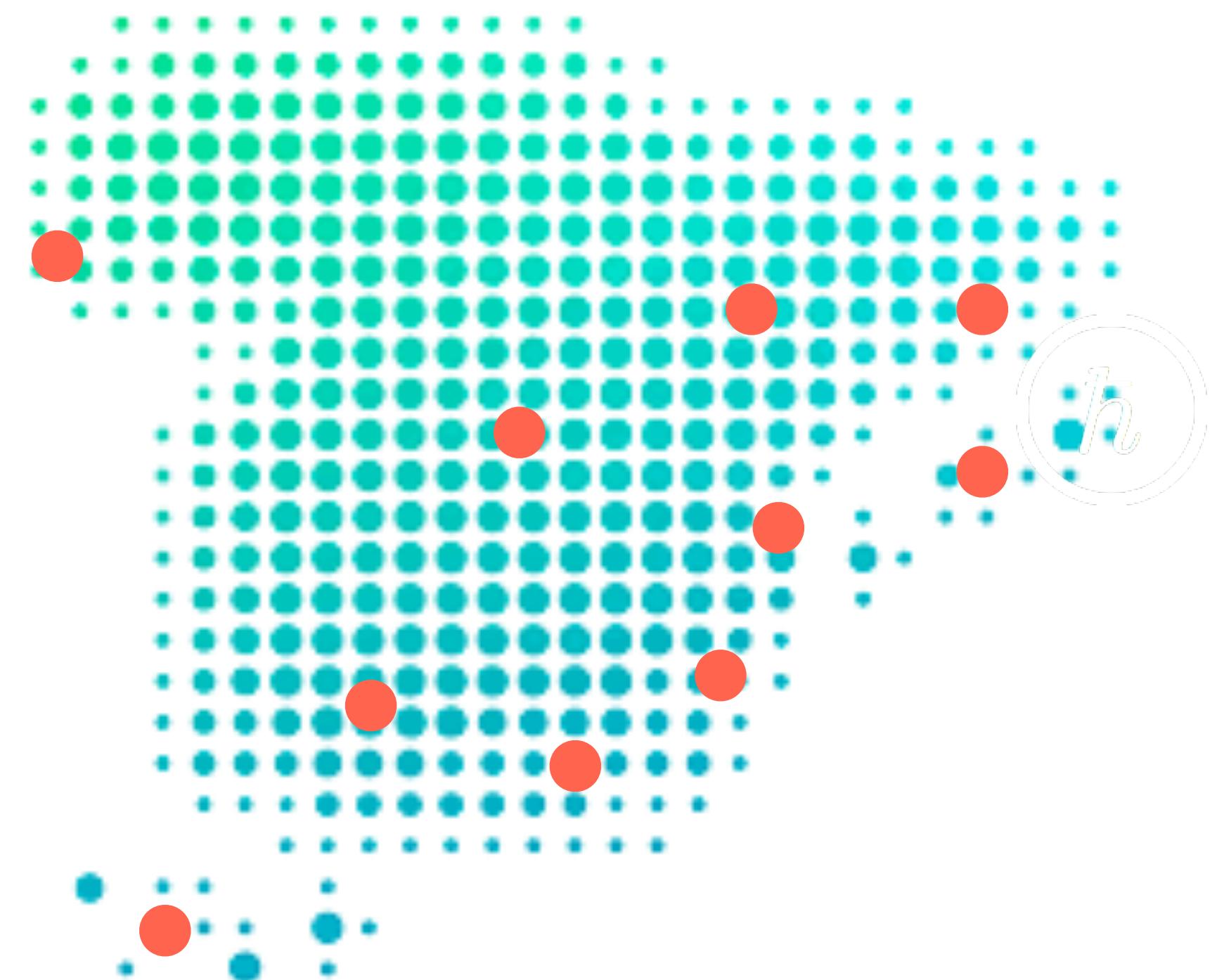
<https://qtep.csic.es/master-quantum-tech>

Participant institutions





- Focus on Quantum
- 60 ECTS (18 TFM, 18 compulsory + 24 elective)
- 29 € / ECTS (60x29=1740)
- Language: English.
- Q-tech researchers across Spain.
- Primarily online (labs in various Spanish locations)
- Workshop (co-organized with PYSQT)



Quantum, delocalized, with experts

- **Masterclasses (pre-recorded): 5 hours/ECTS.** Students can watch at their own pace.
- **Practical classes (synchronous participation evaluated): 2.5-3 hours/ECTS**
Practical classes are recorded so that students can review them later.
- **Tutorials: 5 for 3 ECTS subjects.** They are not recorded.

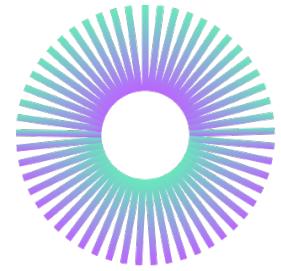
Compulsory:

- Fundamentals of quantum technologies (3 ECTS)
- Advanced Quantum Mechanics (6 ECTS)
- Theory of quantum information (6 ECTS)
- Workshop on quantum technologies (3 ECTS)
- Master Thesis project dissertation (18 ECTS)

- Implementation of quantum technologies (3 ECTS)
- Quantum cryptography and communication (6 ECTS)
- Open quantum systems and quantum thermodynamics (6 ECTS)
- Machine learning and quantum computers (3 ECTS)
- Superconducting quantum circuits (3 ECTS)
- Quantum nanophotonics (3 ECTS)
- Quantum technologies with photons and atoms (3 ECTS)
- Semiconductor and hybrid qubits (3 ECTS)
- Quantum sensors (6 ECTS)
- Micro/nano fabrication for quantum technologies (3 ECTS)
- Quantum technologies laboratory (6 ECTS)

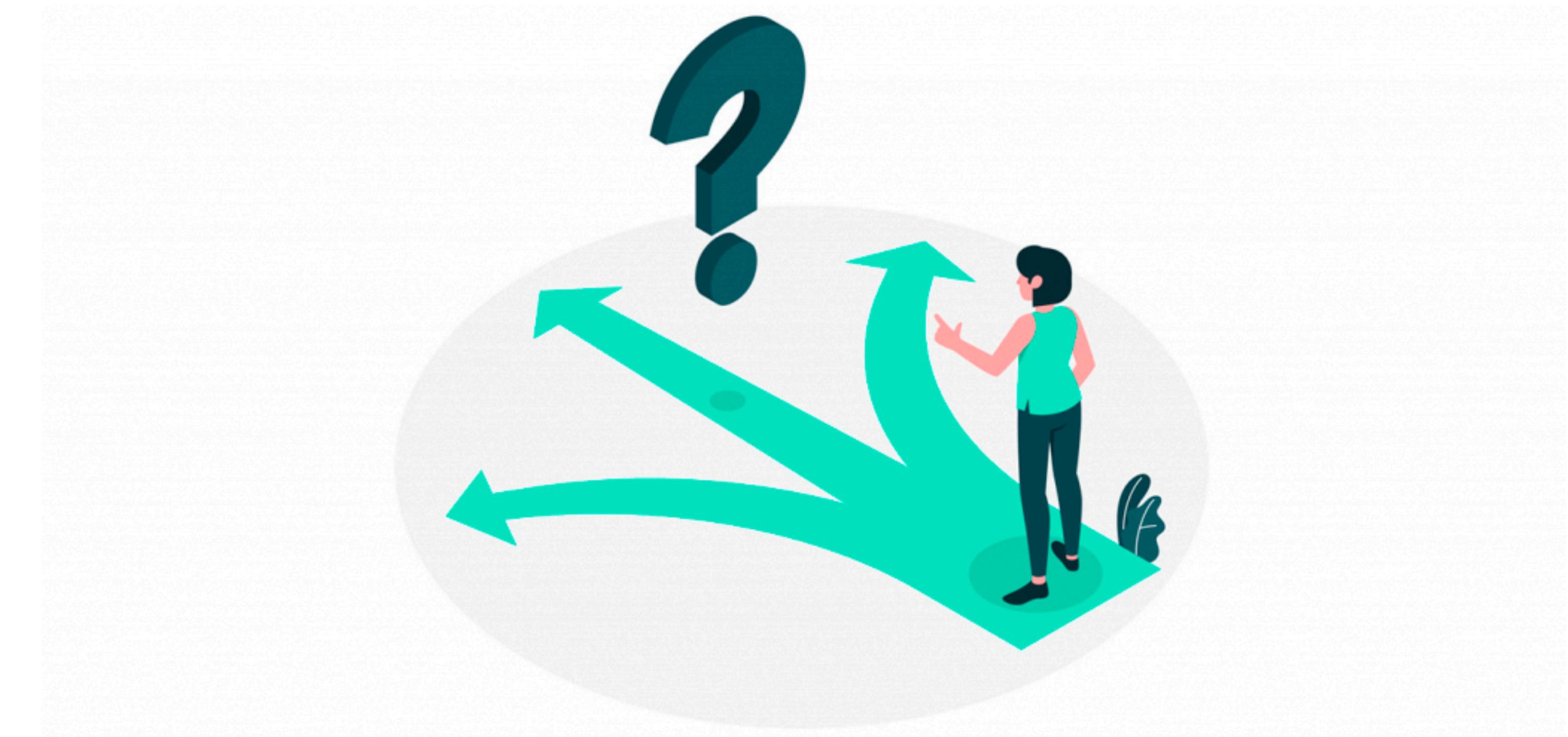
Fellowships:

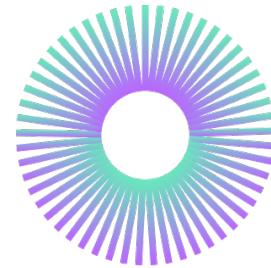
- JAE-Intro
- Beca de Colaboración
- Pi2 (INMA)
- ...



Career opportunities

- Academia (PhD)
- Industry (with and without PhD)





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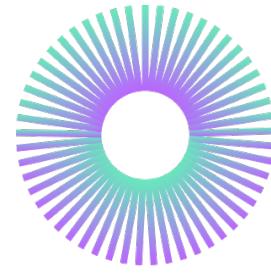
Pilar: Quantum Software Developer @ NTT-Data (Zaragoza)



Álvaro: Quantum Algorithms @ Inspiration-Q (Madrid)



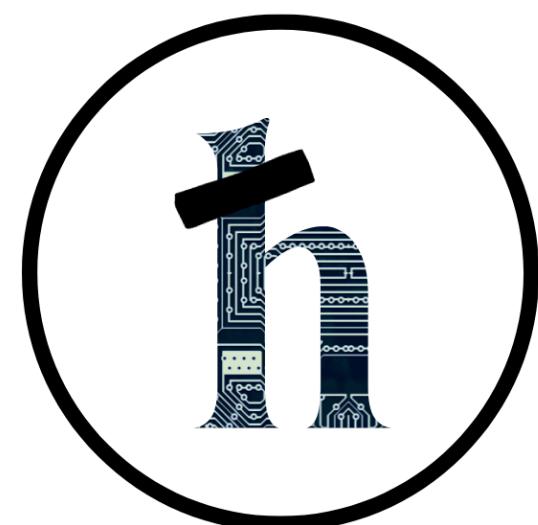
Teresa: Data Scientist @ QuantumBlack McKinsey (Madrid)



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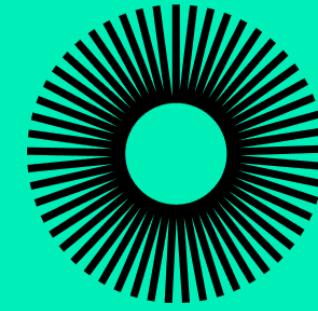


co-organized with:



PYSQT

PHD AND YOUNG
SCIENTISTS QUANTUM
TECHNOLOGIES NETWORK



Master's Degree in
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Matricula: 11 de Marzo hasta el 20 de Mayo

<https://qtep.csic.es/master-quantum-tech>

