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QUANTUM COMPUTERS: THE R&D CHALLENGES

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Pol FORN-DIAZ leads the experimental team at QUANTIC. He has a background on superconducting quantum devices for quantum information applications and quantum optics. He obtained his PhD from TU Delft in 2010, with a study of superconducting flux qubits and the limits of the interaction strength to a superconducting resonator. He was then a postdoctoral researcher in the Kimble group at the California Institute of Technology working on interfacing cold atoms and photonic waveguides. Later he was a postdoctoral fellow at the Institute for Quantum Computing in the University of Waterloo, working with Dr. C. M. Wilson on superconducting qubits interacting with propagating microwave fields. He is a partner at Entanglement Partners SL.

Since May 2019, Pol holds a researcher position at the High Energy Physics Institute (IFAE) at the Bellaterra campus near Barcelona. His group at IFAE is the Quantum Computing Technology.

QUANTIC is a joint venture between the Barcelona Supercomputing Center, the University of Barcelona and the High Energy Physics Institute (IFAE). The research directions are focused on performing quantum computation in a laboratory of superconducting quantum circuits and studying new applications for quantum processors.

The Barcelona Supercomputing Center –Centro Nacional de Supercomputación (BSC-CNS) is the leading supercomputing center in Spain. It hosts MareNostrum 4, one of the most powerful supercomputers in Europe with 165,888 processors providing 11.1 Petaflops/s of processing power to scientific research. (credit QUANTIC @ BSC/UB/IFAE), <http://quantic.bsc.es/>)

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