



PROFILE	Expert Researcher in the field of cryogenic devices for Physics and Quantum Sensing, (Tenure Track position)
N. POSTS	1
LOCATION	TRENTO (ITALY)
VALID TILL	09.06.2021 New Application deadline: 30th of June, 2021
DESCRIPTION	<p>The position offers the opportunity of working for the development of frontier devices based on superconductive circuits with at and beyond the state-of-the-art for high sensitivity sensors and devices for physics and quantum technology applications. Adequate experience in realisation and/or design and operation of cryogenics devices like Kinetic Inductance Detectors (KID), Transition Edge Sensors (TES), Josephson junctions, Superconducting Quantum Interference Devices (SQUID) or/and quantum devices like parametric amplifiers, superconductive qubits and Quantum Electrodynamics circuits (cQED) with planar microtechnology. Main Tasks: the successful candidate will work within the Microsystem group (MST) of the Sensors and Devices centre of FBK and her/his research activity will involve: Device design (accurate devices simulations; layout of the devices). Fabrication of the devices, including: processing step preparation for optimised manufacturing; careful optimisation and correction of every processing step; organisation of the clean room operations. Process characterization (control measurements during the fabrication process flow; data analysis). Packaging, deployment and functional testing.</p> <p>Requirements:</p> <ul style="list-style-type: none">• Education: PhD in physics or Electronics Engineering, Microelectronics or equivalent degree• Specific experience in the field of cryogenics devices, superconductivity, bolometers or quantum sensing and computing. The candidate has preferably knowledge of the fabrication techniques and clean room processes, namely silicon fabrication technology and previous experience of device characterisation and deployment in experiments• Hand-on activities in bolometers, cryogenic quantum sensors, cQED• Hand-on activities in the manufacturing technology of the above devices using planar silicon based microfabrication• Knowledge of design techniques for cryogenic devices (TES, KID, SQUID)• Experience with simulation and modelling software platforms for RF• Experience with the functional characterisation of the devices (electrical measurements, use of cryostats)• Good knowledge and proficiency of the English language• Good publication track record in field of the proposal position <p>Preferable requirements: Experience in data analysis and interpretation, good team working attitude good self-organisation and autonomous operation, experience in working for research projects.</p> <p>Employment: Tenure Track position leading to an FBK 3rd Level Researcher (R3) permanent contract. full time (38 h per week). <u>Gross annual salary:</u> about 39.500€, plus objectives achievement bonus. <u>Start date:</u> September 2021 <u>Benefits:</u> https://www.welfarefbk.info/</p>
HOW TO APPLY	For more info and on line application: https://jobs.fbk.eu/