QUANTERA
ERA-NET Cofund in Quantum Technologies

QuantERA Call 2021
Projects recommended for funding

Important: The final funding decision will depend on national regulations of the funding organisations.

Call topic: Quantum Phenomena and Resources (QPR)		
Acronym & Title of the Project	**Coordinator/Institution & Country**	**Funding organisations**
DISCO: Dicke-enhanced single-emitter strong coupling at ambient conditions as a quantum resource	**Ortwin Hess** Trinity College Dublin / School of Physics and CRANN Institute, **Ireland**	DFG (Germany), SFI (Ireland), NCN (Poland)
DQUANT: Dissipative Quantum Chaos Perspective on Near-Term Quantum Computing	**Pedro Ribeiro** Instituto Superior Técnico / Physics Department, **Portugal**	DFG (Germany), RCN (Norway), NCN (Poland), FCT (Portugal), MIZS (Slovenia)
DYNAMITE: Next Generation Quantum Simulators: From DYNAMIcal Gauge Fields to Lattice Gauge ThEory	**Maciej Lewenstein** ICFO-Institute of Photonic Sciences, **Spain**	DFG (Germany), MUR (Italy), NCN (Poland), AEI (Spain), SNSF (Switzerland)
EQUIP: Error Correction for Quantum Information Processing	**Valentin Savin** Commissariat à l'Energie Atomique et aux Energies Alternatives (CEA), **France**	AKA (Finland), ANR (France), DFG (Germany), AEI (Spain)
ExTRaQT: Experiment and Theory of Resources in Quantum Technologies	**Alexander Streltsov** University of Warsaw, Centre for Quantum Optical Technologies, **Poland**	DFG (Germany), NCN (Poland), AEI (Spain)
HQCC: Hybrid Quantum Classical Computation	**Andris Ambainis** University of **Latvia**	DFG (Germany), NKFIH (Hungary), VIAA (Latvia), FCT (Portugal)
LEMAQUME: LEvitated MAgnets for QUantum MEtrology	**Andrea Vinante** CNR / Istituto di Fotonica e Nanotecnologie (IFN) – Trento, **Italy**	ANR (France), DFG (Germany), InnovationAuth (Israel), CNR (Italy), VIAA (Latvia)
MAGMA: Magnetic topological insulators for robust Majorana bound states	**Thomas Schmidt** Department of Physics and Materials Science, University of **Luxembourg**	DFG (Germany), FNR (Luxembourg), AEI (Spain)
MENTA: Accessible Quantifiers of Multipartite Entanglement in Atomic Systems	**Christoph Westbrook** Laboratoire Charles Fabry de l'Institut d'Optique Graduate School, **France**	FWF (Austria), ANR (France), DFG (Germany), CNR (Italy), AEI (Spain)
Mf-QDS: Microfluidics Quantum Diamond Sensor	**Javier Prior Arce** Universidad de Murcia. Departamento de Física, **Spain**	DFG (Germany), InnovationAuth (Israel), NCN (Poland), AEI (Spain)
MOCA: Integrated microwave to optical conversion on a superconducting atom chip	**József Fortágh** University of Tübingen, Department of Physics, **Germany**	ANR (France), DFG (Germany), NKFIH (Hungary), MUR (Italy)

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MQSens: Quantum sensing with nonclassical mechanical oscillators	**Yiwen Chu** ETH Zürich, **Switzerland**	AKA (Finland), MFIN (Malta), RCN (Norway), AEI (Spain), SNSF (Switzerland)
PhoMemtor: Photonic Quantum Memristor Networks	**Philip Walther** University of Vienna, Faculty of Physics, **Austria**	FWF (Austria), CNR (Italy), NCN (Poland)
QATACOMB: Quantum correlAtions in TerAhertz qcl COMBs	**Luigi Consolino** National Institute of Optics – CNR, **Italy**	ANR (France), DFG (Germany), CNR (Italy)
QOPT: Quantum algorithms for optimization	**Aleksandrs Belovs** University of **Latvia**	FNRS (Belgium), ANR (France), DFG (Germany), VIAA (Latvia)
QuSiED: Quantum simulation with engineered dissipation	**Zala Lenarčič** Jožef Stefan Institute, **Slovenia**	FWF (Austria), DFG (Germany), NKFIH (Hungary), MIZS (Slovenia), AEI (Spain)
SensExtreme: Quantum sensing with diamond defects at extreme conditions	**Audrius Alkauskas** Center for Physical Sciences and Technology (FTMC), **Lithuania**	ANR (France), DFG (Germany), NKFIH (Hungary), LMT (Lithuania), SNSF (Switzerland)
SiQUOS: Superconducting Silicon Qubit in CMOS Technology	**Lefloch François** Univ. Grenoble Alps/Grenoble INP/CEA-IRIG-DePHY-PHELIQS, **France**	ANR (France), NKFIH (Hungary), VR (Sweden)
SPARQL: Sequential parametric amplification: quantum technology with multimode light	**Maria Chekhova** Max-Planck Institute for the Science of Light (MPL), **Germany**	MEYS (Czech Republic), ANR (France), DFG (Germany), InnovationAuth (Israel)
SQUEIS: Squeezing-Enhanced Inertial Sensing	**Luca Pezzè** Consiglio Nazionale delle Ricerche (CNR), **Italy**	ANR (France), DFG (Germany), CNR (Italy), INFN (Italy), NCN (Poland)
STAQS: Shortcuts to Adiabaticity for Quantum Computation and Simulation	**Wolfgang Lechner** University of Innsbruck/ Institute for Theoretical Physics, **Austria**	FWF (Austria), DFG (Germany), CNR (Italy), MUR (Italy), FNR (Luxembourg), NCN (Poland)
SuperLink: Superconducting quantum-classical linked computing systems	**Giovanni Piero Pepe** Dipartimento di Fisica, Università di Napoli Federico II, and Italian National Research Council CNR-SPIN, **Italy**	InnovationAuth (Israel), CNR (Italy), VR (Sweden)
T-NiSQ: Tensor Networks in Simulation of Quantum matter	**Simone Montangero** INFN - Sezione di Padova, **Italy**	FWF (Austria), DFG (Germany), INFN (Italy), MIZS (Slovenia), AEI (Spain)
TOBITS: Non-Abelian anyons for topological qubits	**Manohar Kumar** Aalto University, **Finland**	AKA (Finland), ANR (France), NCN (Poland), SNSF (Switzerland)
VERIqTAS: Verification of quantum technologies, systems and applications	**Remigiusz Augusiak** Center for Theoretical Physics, Polish Academy of Sciences, **Poland**	FWF (Austria), FNRS (Belgium), ANR (France), NCN (Poland), AEI (Spain)

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Call topic: Applied Quantum Science (AQS)		
Acronym & Title of the Project	**Coordinator/Institution & Country**	**Funding organisations**
ARTEMIS: Neural networks controlling superconducting quantum circuits	**Benjamin Huard** Ecole Normale Supérieure de Lyon, Physics Lab, **France**	ANR (France), BMBF/VDI TZ (Germany), InnovationAuth (Israel)
ConSpiQuOS: Controlling Spins in Quantum systems in an Online Setting	**Jonatan Kutchinsky** QDevil ApS, **Denmark**	IFD (Denmark), InnovationAuth (Israel), RCN (Norway)
CVSTAR: Continuous-Variable Multi-User Quantum Key Distribution for 5G and distributed storage applications	**Tobias Gehring** Department of Physics, Technical University of **Denmark**	FFG (Austria), MEYS (Czech Republic), IFD (Denmark)
EQUAISE: Enabling QUAntum Information by Scalability of Engineered quantum materials	**Antonio Polimeni** Department of Physics, Sapienza Università di Roma, **Italy**	BMBF/VDI TZ (Germany), CNR (Italy), MUR (Italy), NCBR (Poland), AEI (Spain)
E2TPA: Exploiting Entangled two-photon absorption	**Rob Thew** University of Geneva, Department of Applied Physics, **Switzerland**	BMBF/VDI TZ (Germany), NCBR (Poland), SNSF (Switzerland)
InQuRe: Field testing an integrated quantum repeater node	**Florian Kaiser** Universität Stuttgart / 3. Physikalisches Institut, **Germany**	ANR (France), BMBF/VDI TZ (Germany), UEFISCDI (Romania)
MAESTRO: Mastering Technologies for Scalable Spin-based Solid-State Quantum Processors	**Milos Nesladek** Hasselt University, **Belgium**	FWO (Belgium), ANR (France) BMBF/VDI TZ (Germany), NKFIH (Hungary)
NImSoQ: New Imaging and control Solutions for Quantum processors and metrology	**Anna Kaminska** Creotech Instruments S.A., **Poland**	HRZZ (Croatia) BMBF/VDI TZ (Germany) NCBR (Poland)
QD-E-QKD: Quantum Dots for Entanglement-based Quantum Key Distribution	**Rinaldo Trotta** Sapienza University of Rome, **Italy**	FFG (Austria), MEYS (Czech Republic), BMBF/VDI TZ (Germany), CNR (Italy), MUR (Italy)
QuantaGENOMICS: Quantum Enabled Secure Multiparty Computation for Genomic Medicine	**Armando Nolasco Pinto** Instituto de Telecomunicações, **Portugal**	ANR (France), FCT (Portugal), AEI (Spain)
QuantumGuide: Hollow-core fiber atom guide for quantum devices	**Simon Stellmer** University of Bonn, **Germany**	FFG (Austria), BMBF/VDI TZ (Germany) NCBR (Poland), SNSF (Switzerland)
QuRAMAN: Quantum enhanced Raman spectroscopy for bioimaging applications	**Mikael Lassen** Danish Fundamental Metrology A/S, **Denmark**	IFD (Denmark), ETAg (Estonia), BMBF/VDI TZ (Germany)
SIQCI: Scalable Architecture for Ion-Trap Quantum Computing Integration	**Thomas Monz** Alpine Quantum Technologies GmbH, **Austria**	FFG (Austria), BMBF/VDI TZ (Germany), NCBR (Poland)
uTP4Q: A versatile quantum photonic IC platform through micro-transfer printing	**Dries Van Thourhout** Ghent University, Photonics Research Group, **Belgium**	FWO (Belgium), IFD (Denmark), BMBF/VDI TZ (Germany), MIZS (Slovenia), SNSF (Switzerland)

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement no 101017733