

Low-Temperature Quantum Detectors

LIST OF POSTERS

August 3-6, 2025
Clarion Hotel, Helsinki



POSTER SESSION I: Monday, August 4 16:10 – 18:00

- 1 **Fida Ali**, Aalto University - Quantum Photodetectors Based on Two-dimensional Layered Materials
- 2 **Alessandro Alocco**, Polytechnic University of Turin - Generation of Multimode Entanglement in Cryogenic Quantum Circuits
- 3 **Alejandro Andres Juanes**, Institute of Science and Technology - Continuous - to - discrete variable entanglement distribution with superconducting circuits
- 4 **Guerino Avallone**, University of Salerno - Nb-Based Josephson Traveling Wave Parametric Amplifiers for Quantum-Limited Readout
- 5 **Fartash Chalangari**, Tampere University - Controlling Electronic Transport via Variational Scars in Two-Dimensional Quantum Dots
- 6 **Yu-Cheng Chang**, Aalto University - Microwave Detection with Scalable Graphene Bolometers in the Strong Localization Regime
- 7 **Marcel Človečko**, Institute of Experimental Physics SAS - A tunable quantum resonant amplifier based on magnon BEC in superfluid $^3\text{He-B}$ phase
- 8 **Shruti Dogra**, Aalto University - A Continuous-Coherent Interaction-Free Measurement Protocol for Quantum Sensing and Beyond
- 9 **Tosson Elalaily**, Aalto University - Tuning Schottky barrier transparency in $\text{CoSi}_2/\text{Si}/\text{CoSi}_2$ junctions fabricated by using Ga focused ion beam
- 10 **Ruihuan Fang**, Aalto University - Quantum phase splitting in suspended NbSe_2 superconductor
- 11 **Levente Fekete**, Budapest University of Technology and Economics - Investigating Andreev molecule in InAs nanowire
- 12 **Zhuoran Geng**, University of Jyväskylä - Phonon-blocked junction calorimeter
- 13 **Yikun Gu**, University of Zaragoza - Dark matter detection with superconducting qubit in the RADES experiment
- 14 **Joel Hättinen**, VTT - Electronic cooling for quantum detectors
- 15 **Matthew Herbst**, Aalto University - Detecting Gravity at the Milligram Scale Using Optomechanics
- 16 **Youqiang Huang**, Aalto University - Chiral spin and optics in 2D magnets
- 17 **Daniel Julian**, Palacký University - Criticality and nonGaussian interference induced by resonant qubit modulation
- 18 **Samuel Kern**, Comenius University - Impedance and Phase Matching in Josephson Metamaterial TWPA's

- 19 **Stanislav Khaldeev**, Aalto University - Utilization of noise measurements to probe the electron-phonon coupling of magic-angle twisted bilayer graphene
- 20 **Tom Kiilerich**, University of Turku - Silicon photomultipliers for sensitive light detection below 1K
- 21 **Mikko Kiviranta**, VTT - VTT superconducting multilayer fabrication process for Quantum 1.0 devices such as dc-SQUIDs
- 22 **Dávid Attila Kóti**, Budapest University of Technology and Economics - Investigation of current-phase relations using microwave measurement techniques
- 23 **Simon Lang**, Fraunhofer EMFT - Advanced Fabrication of Superconducting Circuit Elements for Quantum Applications
- 24 **Anna Levochkina**, Aalto University - Exploring Residual Three-Wave Mixing Amplification Regime in a SNAIL-based Traveling Wave Parametric Amplifier
- 25 **Ilari Lilja**, Aalto University - Genuinely multipartite entangled microwave graph states
- 26 **Fabio Lingua**, KTH, Royal Institute of Technology - Continuous-variable square-ladder cluster states in a microwave frequency comb

POSTER SESSION II: Tuesday, August 5 16:10 – 18:00

- 27 **Juho Luomahaara**, VTT - Characterization of lens-coupled kinetic inductance bolometers
- 28 **Dmitrii Lvov**, Aalto University - Qubit thermometry of a mesoscopic heat bath
- 29 **Luca Magazzù**, Aalto University - Heat rectification in a qubit-oscillator system
- 30 **Juuso Manninen**, University of South-Eastern Norway - Hybrid optomechanical superconducting qubit system
- 31 **John McCord**, Aalto University - Coherent Interaction-Free Detection with Superconducting Qutrits
- 32 **Darren Moore**, Palacky University - Nonlinear Squeezing in Classical and Quantum Mechanics
- 33 **Ekaterina Mukhanova**, Aalto University - Balanced homodyne detection of ultra-weak signals using traveling wave Josephson parametric amplifiers
- 34 **Chris Nill**, University of Tübingen - Avalanche Terahertz Photon Detection in a Rydberg Tweezer Array
- 35 **Lukas Nulens**, KU Leuven, Belgium - Nonvolatile Cryogenic Phase Slip Memory with Single-Shot Readout
- 36 **Kimin Park**, Palacky University - Quantum Sensing via Qubit-Oscillator Interferometry
- 37 **Kirill Petrovnin**, Aalto University - Microwave photon detection at parametric criticality
- 38 **Eemil Praks**, Aalto University - Experimental comparison of intrinsically normal Coulomb blockade thermometer and Shot noise thermometer
- 39 **Tuomas Pyhäranta**, Aalto University - Active suppression of quasiparticle poisoning in superconducting devices
- 40 **Elmeri Rivasto**, University of Southern Denmark - Single-Photon Detectors for Ultra-Low Background Axion Experiments

- 41 **Toomas Rõõm**, National Institute of Chemical Physics and Biophysics - Sub-THz Faraday and Kerr spectroscopy in high magnetic field and below 1 kelvin
- 42 **Aki Ruhtinas**, University of Jyväskylä - Fabrication of quantum devices with focused helium ion beam
- 43 **Aleksei Semakin**, University of Turku - Experiments with hydrogen atoms at ultra-low energies
- 44 **Elena Sergeicheva**, Aalto University - Negative non-linear differential dissipation in mechanical quartz resonators
- 45 **Paolo Settembri**, University of L'Aquila - Anisotropic Migdal Effect for Dark Matter Detection
- 46 **Aleksandr Strelnikov**, Aalto University - On-chip NIS bolometry for quantum interference experiments
- 47 **Igor Todoshchenko**, Aalto University - Suspended nanotube as a probe of low dimensional phases
- 48 **Mikael Vartiainen**, Aalto University - Entanglement under multiple parametric excitations in quantum circuits
- 49 **Klaara Viisanen**, VTT - CVD graphene based superconducting transistor technology for integrated circuits and ultrasensitive thermal detectors
- 50 **Zhongcheng Xiang**, Chinese Academy of Sciences - Tunable Coupling Architectures Using Bypass Capacitance for Large-Scale Multiple-Qubit Schemes
- 51 **Peter Zalom**, Institute of Physics - Multi-terminal quantum-dot-based Josephson junctions operating as efficient superconducting transistors and diodes
- 52 **YuHan Chang**, Aalto University - Neural-network-based design and implementation of fast and robust quantum gates
- 53 **Sergei Lemziakov**, Aalto University - Thermometry based on superconductive qubit

