30th International Conference on Low Temperature Physics

7-13 August 2025, Bilbao, Spain

Thursday, 7 August, Day 1

12h00	**Arrival and registration**
14h15	**Auditorium Level 4**
	Opening
	Award of Fritz London Memorial Prize. Presenter Pertti Hakonen
14h30	(14h30-15h15) Robert Hallock, *Helium: Thin Films and Solids*
15h15	(15h15-16h00) John Saunders, *Quantum Materials and Sensors into the Microkelvin Regime*
16h00	(16h00-16h45) Ali Yazdani, *Emergent quantum phenomena under the microscope*

16h45-17h15 Coffee break

17h15	**Award of Simon Memorial Prize. Presenter Andrew Armour**
	(17h15-18h00) Adiel Stern, *Fractional Quantum Hall States and Fractional Chern Insulators - A Unified View*
18h00	**Award of Olli V. Lounasmaa Memorial Prize. Chair Mika Sillanpää**
	(18h00-18h45) Andrew N. Cleland, *Quantum acoustics: Manipulating individual phonons*

18h45-20h00 Welcome reception

Friday, 8 August, Day 2

	Auditorium level 4 (900)
	Plenary session 1. Chair: Michele Modugno
09h00	(09h00-09h45) Francesca Ferlaino, *Supersolids in Magnetic Gases: From Roton Softening to Quantum Vortices*
09h45	(09h45-10h30) Leticia Tarruell, *Probing supersolidity through excitations in a spin-orbit-coupled Bose-Einstein condensate*

10h30-11h00 Coffee break and exhibition

	Semiplenary Session 1	
	Auditorium level 4. Chair: Fernando Luis	**Luxua 1 level 3. Chair: Alfredo Levy Yeyati**
11h00	(11h00-11h35) Tom Manovitz, *Quantum coarsening and criticality on a programmable quantum simulator*	(11h00-11h35) Amir Yacoby, *Local Probes of Spin Excitations in Quantum Matter*
11h35	(11h35-12h10) Mikko Möttönen, *Millikelvin electronics for quantum computing and sensing*	(11h35-12h10) Shahal Ilani, *The Quantum Twisting Microscope: Visualizing Waves in Quantum Matter*

12h10-12h15 Room change to parallel sessions

Friday, 8 August, Morning Parallel Sessions

Room 1B level 5 8.PS1.1 Superfluid helium-I Chair: R. Hallock	**Luxua 1 level 3** 8.PS1.2 Nickelates-I Chair: Y. Maeno	**Auditorium** 8.PS1.3 UTe_2-I Chair: J. P. Paglione	**Room 1A level 5** 8.PS1.4 Strongly correlated magnets-I Chair: V. Taufour	**Luxua 2 level 3** 8.PS1.5 Topology and quantum materials-I Chair: C. Dean	**Room 2 level 5** 8.PS1.6 Superconducting properties and devices Chair: V. Madhavan	**Room level 2** 8.PS1.7 Electron interactions and quantum interference Chair: Sh. Ilani	**Room 3 level 5** 8.PS1.8 Superconducting quantum circuits-I Chair: N. Roch	**Room 4 level 5** 8.PS1.9 Low temperature instrumentation & applications-I Chair: B. Kalisky
(12h15-12h40). 8.PS1.1.1. Jere Mäkinen *Time crystal optomechanics*	(12h15-12h40) 8.PS1.2.1. J. Zhao *Superconductivity in pressurized trilayer nickelate single crystals*	(12h15-12h40) 8.PS1.3.1. J. P. Brison *Field and Pressure-induced Superconducting Phases in UTe_2*	(12h15-12h40) 8.PS1.4.1. F. Assaad *Dimensional mismatch Kondo systems*	(12h15-12h40) 8.PS1.5.1. A. Grushin *Enforcing topology in non-crystalline metals*	(12h15-12h40) 8.PS1.6.1. R. Shaikhaidarov *Development of superconducting Bloch Transistor.*	(12h15-12h40) 8.PS1.7.1. M. Hashisaka *Mach-Zehnder interference of fractionalized electron-spin excitations*	(12h15-12h40) 8.PS1.8.1. I. Pop *Superconducting Qubits Resilient to Tesla-Scale Magnetic Fields*	(12h15-12h40) 8.PS1.9.1. S. de Graaf *In-situ structural and chemical identification of material defects in superconducting quantum circuits at mK temperatures*
(12h40-12h55) 8.PS1.1.2 C. Uriarte *Quantum Turbulence in ^4He Characterized by a Superconducting Levitator Probe*	(12h40-12h55) 8.PS1.2.2. S. Onari *Analysis of non-fermi-liquid transport phenomena in thin-film bilayer nickelate $La_3Ni_2O_7$*	(12h40-12h55) 8.PS1.3.2. Arthur Carlton-Jones *Microwave Electrodynamics and Low-Energy Excitations of Superconducting UTe_2*	(12h40-12h55) 8.PS1.4.2. K. Povarov *Pressure-induced ordering in the gapped quantum magnet DTN*	(12h40-12h55) 8.PS1.5.2. L. Luszynski *Effect of uniaxial stress on the magnetostriction of Weyl semimetal TaAs*	(12h40-12h55) 8.PS1.6.2. T. Domanski *Non-equilibrium signatures of electron pairing in quantum dots coupled to superconductors*	(12h40-12h55) 8.PS1.7.2. V. Kashcheyevs *Evidence of Coulomb liquid phase in a few-electron droplets*	(12h40-12h55) 8.PS1.8.2. H. Bohuslavskyi *Superconducting-transistor technology based on CVD graphene: toward superconducting integrated circuits*	(12h40-12h55) 8.PS1.9.2. A. Sharma *Cryogenic SPM tools for magnetic imaging: MFM and NV magnetometry*
(12h55-13h10) 8.PS1.1.3 D. Schmoranzer *Discrete dissipation events measured with Si microwires in pure superfluid ^4He*	(12h55-13h10) 8.PS1.2.3. F-C. Zhang *Self-doped molecular Mott insulator for superconducting $La_3Ni_2O_7$*	(12h55-13h10) 8.PS1.3.3. T. Vasina *Identicality of the High-Field and High-Pressure Superconducting Phases in UTe_2*	(12h55-13h10) 8.PS1.4.3. K. Panda *Raman spectroscopy of the magnetic coupling in Gd-i-MAX*	(12h55-13h10) 8.PS1.5.3. Y. Dagan *Enhanced Nonlinear Response by Manipulating the Dirac Point at the (111) LaTiO3/SrTiO3 Interface*	(12h55-13h10) 8.PS1.6.3. J. Shen *Evidence of p-wave Pairing in $K_2Cr_3As_3$ Superconductors from Phase-sensitive Measurement*	(12h55-13h20) 8.PS1.7.2. A. Chubukov *Isospin orders and superconductivity in graphene multilayers*	(12h55-13h10) 8.PS1.8.3. E. Mukhanova *1/f phase noise in traveling wave parametric amplifier*	(12h55-13h10) 8.PS1.9.3. A. Noah *Nanoscale magnetic effects in the 2D magnet $CrGeTe_3$*
(13h10-13h25) 8.PS1.1.4 A. Ghosh *Wigner crystallization on curved surfaces: collapsing multielectron bubbles in liquid He^4 and He^3*	(13h10-13h25) 8.PS1.2.4 M. Naamneh *Pi/4 phase shift in the anisotropic magnetoresistance of infinite layer nickelates*	(13h10-13h25) 8.PS1.3.4 Suguru Hosoi *Presence/absence of point nodes revealed by thermal conductivity in UTe_2*			(13h10-13h25) 8.PS1.6.4 J. Ortuzar *Revealing inter-band electron pairing in a superconductor with spin-orbit coupling*		(13h10-13h25) 8.PS1.8.4 Y-Ch. Chang *Towards ultra strong-coupling quantum thermodynamics using a superconducting flux qubit*	(13h10-13h25) 8.PS1.9.4 Kamal Brahim *Measurements into the Single Photon Regime in Ferroelectric Materials*

13h25-14h00 Lunch

14h00-15h45 Poster session.

	Semiplenary Session 2	
	Auditorium level 4. Chair Eli Zeldov	**Luxua 1 level 3. Chair Nacho Pascual**
15h45	(15h45-16h20) Long Ju, *Fractional Quantum Anomalous Hall Effect and Chiral Superconductivity in Graphene*	(15h45-16h20) Vidya Madhavan, *Vector Magnetic Field Response of Superconductivity and Charge Density Wave in UTe_2*
16h20	(16h20-16h55) Chun Ning (Jeanie) Lau, *Quantum Geometry and Screening of Flat Band Superconductivity in Twisted Bilayer Graphene*	(16h20-16h55) Beena Kalisky, *Imaging Quantum Materials*

16h55-17h25 Coffee break

Friday, 8 August, Afternoon Parallel Sessions

Room 1B level 5 8.PS2.1. Superfluid ^{3}He Chair: J. Mäkinen	**Room level 2** 8.PS2.2. Quantum gases Chair: L.H. Kendrick	**Luxua 1 level 3** 8.PS2.3 Iron based superconductors Chair: F. Massee	**Luxua 2 level 3** 8.PS2.4. Thin films and interfaces-I Chair: N. Trivedi	**Auditorium 1** 8.PS2.5. Correlations and graphene Chair: E. Bascones	**Auditorium 2** 8.PS2.6. Topology and Quantum Materials-II Chair: A. Grushin	**Room 1A level 5** 8.PS2.7. Superconductivity, Spin orbit coupling and diode effects. Chair: A. Di Bernardo	**Room 2 level 5** 8.PS2.8. Thermal effects and heat transport Chair: Ch. Strunk	**Room 3 level 5** 8.PS2.9. Superconducting quantum circuits-II Chair: I. Pop	**Room 4 level 5** 8.PS2.10. LT Detectors-I Chair: M. Sillanpää
(17h25-17h50). 8.PS2.1.1. Samuli Autti *QUEST-DMC: Looking for Low Mass Dark Matter using Superfluid ^{3}He*	(17h25-17h50). 8.PS2.2.1. Yuki Kawaguchi *Dynamics of one-dimensional spinless fermions coupled with dynamical axion fields*	(17h25-17h50). 8.PS2.3.1. M. Allan *What limits the critical temperature for superconductivity in quantum materials?*	(17h25-17h50). 8.PS2.4.1. C-z. Chang *Interface-Induced Superconductivity in Quantum Anomalous Hall Insulators*	(17h25-17h50). 8.PS2.5.1. E. Zeldov *Visualizing isospin order and exchange interactions in rhombohedral graphene*	(17h25-17h50). 8.PS2.6.1. J. Haruyama *Pseudo Tunnel Magnetoresistance Behaviours in Large-twist vdW Integration of Thin Magnetic Layers Fe_3GeTe_2*	(17h25-17h50). 8.PS2.7.1. N. Pascual *A nanoscale Cooper pair tunneling diode*	(17h25-17h50). 8.PS2.8.1. I. Maasilta *Low-temperature heat transfer across vacuum via acoustic phonon tunneling*	(17h25-17h50). 8.PS2.9.1. N. Roch *Josephson meta-materials: a new platform for quantum optics*	(17h25-17h50). 8.PS2.10.1. S. Grohmann *Gravitational-wave detectors cooled with superfluid helium – GRAVITHELIUM*
(17h50-18h05) 8.PS2.1.2 J. W. Scott *Modelling the influence of structural anisotropy on superfluid helium-3 in aerogel*	(17h50-18h05) 8.PS2.2.2. A. Tononi *Dimer problem on a spherical surface*	(17h50-18h05) 8.PS2.3.2. Y. Liu *Pair density wave and modulation state in a monolayer high-T_c iron-based superconductor*	(17h50-18h05) 8.PS2.4.2. N. Kang *Observation of a twofold anisotropy in ultrathin Mo_2C superconducting crystals*	(17h50-18h05) 8.PS2.5.2. R. L. Lee *Charge Sensing of Fractional Quantum Hall States in Graphene*	(17h50-18h05) 8.PS2.6.2. Y. Nagai *Self-Learning Monte Carlo Method with Equivariant Transformer*	(17h50-18h05) 8.PS2.7.2. M. Eto *Enhanced Superconducting Diode Effect Utilizing Quantum Dot*	(17h50-18h05) 8.PS2.8.2. T. Yamamoto *Quantum heat transport across a Josephson junction*	(17h50-18h05) 8.PS2.9.2. Z. Peng *Experimental realization of on-chip few-photon control around exceptional points*	(17h50-18h05) 8.PS2.10.2. D. Helis *A Superconducting Qubit as an Underground Particle Detector*
(18h05-18h20) 8.PS2.1.3 J. Knapp *Evidence for Many Body Localization of ^{3}He atoms in two dimensions*	(18h05-18h20) 8.PS2.2.3. Jacques Tempere *Polarons as probes of superfluid and supersolid phases in quantum gases*	(18h05-18h20) 8.PS2.3.3. M. K. Wu *Correlation between Fe-vacancy and superconductivity in $K_2Fe_{4+x}Se_5$ crystals*	(18h05-18h20) 8.PS2.4.3. J. Zhang *Stacking-selective self-intercalation in $Nb_{1+x}Se_2$*	(18h05-18h20) 8.PS2.5.3. K. Nakazawa *Theory of nonlinear Shubnikov-de Haas effect.*	(18h05-18h30) 8.PS2.6.3. C. Rogero *Epitaxial vdW Heterostructures with Magnetic Transition Metal Dihalides as a Universal Platform for Investigation of the Quantum Effects*	(18h05-18h30) 8.PS2.7.3. I. Tokatly *Effective field theory for coupled charge and spin transport in mesoscopic superconductors*	(18h05-18h20) 8.PS2.8.3. Y. Tokura *Quantum Heat Transport across Capacitively Coupled Quantum Dots*	(18h05-18h20) 8.PS2.9.3. A. Parra-Rodríguez *Exact and dispersive models for superconducting networks*	(18h05-18h20) 8.PS2.10.3. A. D`Addabbo *The monolithic arrays of the BULLKID-DM Kinetic Inductance Detectors searching for light Dark Matter*
(18h20-18h45) 8.PS2.1.4 A. Vorontsov *Modeling superfluid He-3 in anisotropic aerogel*	(18h20-18h45) 8.PS2.2.4. Fernando Sols *Superfluidity from correlations in driven boson systems*	(18h20-18h45) 8.PS2.3.4. H. H. Wen *Small Fermi energy and unique vortex bound states in iron-based superconductors*	(18h20-18h45) 8.PS2.4.4. Thilo Bauch *Quasiparticle Spectroscopy using a YBCO Transmon*	(18h20-18h45) 8.PS2.5.4. V. Geshkenbein *Abrikosov vortices switching Josephson current in magic angle graphene*	(18h30-18h55) 8.PS2.6.4. Chuan Li *Multi-channel second-order topological states in $Bi_{0.97}Sb_{0.03}$*	(18h30-18h55) 8.PS2.7.4. D. Kochan *Magnetoelectric phenomena of non-centrosymmetric superconductors – supercurrent diode effect and anisotropic vortex squeezing*	(18h20-18h45) 8.PS2.8.4. E. Lee *Joule spectroscopy and thermal effects in hybrid superconductor-semiconductor nanodevices*	(18h20-18h45) 8.PS2.9.4. Malika Randeria *Decoherence in fluxonium: a case study in superconducting qubit design*	(18h20-18h45) 8.PS2.10.4. S. Fu *Recent results from CUORE and path towards CUPID*
(18h45-19h00) 8.PS2.1.5 A. Lopez-Eiguren *Numerical simulations of superfluid ^{3}He*		(18h45-19h10) 8.PS2.3.5. S. Mandal *The Interplay of Electron Correlation, El.-Phonon Coupling, and non trivial topology for Enhancing Superconductivity in FeSe/SrTiO3*	(18h45-19h10) 8.PS2.4.5. A. Di Bernardo *Gate control of supercurrents: from earlier evidence to technological applications*	(18h45-19h10) 8.PS2.5.5. Cory Dean *Studies of electron viscosity in graphene - quantitative measurement from magnetoconductance in Corbino*	(18h55-19h20) 8.PS2.6.5. Lin Jiao *Realizing a topological diode effect on SmB6*	(18h55-19h20) 8.PS2.7.5. S. Matsuo *Superconducting diode effect in coherently coupled Josephson junctions*	(18h45-19h10) 8.PS2.8.5. G. Finkelstein *Electrical and thermal properties of the superconductor – quantum Hall interfaces*	(18h45-19h10) 8.PS2.9.5. Y. Zhong *Low-loss interconnects for modular superconducting quantum processors and beyond*	(18h45-19h00) 8.PS2.10.5. S. Quitadamo *First detection of marine microseismic activity with the CUORE ton-scale milliKelvin macro-calorimeters array*

Institute of Physics, Chinese Academy of Sciences Alumni Reception, at the Torre restaurant, 7th floor, from 19 to 22 h.

Saturday, 9 August

	Auditorium level 4 (900)
	Plenary session 1. Chair Naoto Nagaosa
09h00	(09h00-09h45) Lieven Vandersypen, *Quantum computation and simulation with electrons*
09h45	(09h45-10h30) Andrea Young, *Superconductivity and magnetism in rhombohedral graphene multilayers*

10h30-11h00 Coffee break and exhibition

	Semiplenary Session 3	
	Auditorium level 4. Chair John Saunders	**Luxua 1 level 3. Chair Hermann Suderow**
11h00	(11h00-11h35) Petri J. Heikkinen, *QUEST-DMC: The first-order phase transition in superfluid helium-3*	(11h00-11h35) J. C. Seamus Davis, *Imaging Superconductive Topological Surface Band and Spin Triplet Order Parameter of* UTe_2
11h35	(11h35-12h10) Wei Guo, *Recent progress in probing vortex dynamics and developing quantum information platforms*	(11h35-12h10) Peter Hirschfeld, *Overdoped cuprates: disorder, inhomogeneity, Homes scaling and all that*

12h10-12h15 Room change to parallel sessions

Saturday, 9 August, Morning Parallel Sessions

Room 1B level 5 9.PS3.1. Superfluid Helium-II Chair: P. Heikkinen	**Luxua 1 level 3** 9.PS3.2. Superc. non-equilibrium and fluctuations Chair: W. Guo	**Auditorium level 4** 9.PS3.3. Cuprates I Chair: Mo. Randeria	**Luxua 2 level 3** 9.PS3.4. Unconventional superconductivity Chair: Xianhui Chen	**Room 1A level 5** 9.PS3.5. Correlated materials-I Chair: A. McCollam	**Room 2 level 5** 9.PS3.6. Quantum Hall Chair: R. Seoane	**Room 3 level 5** 9.PS3.7. Quantum Transport-I Chair: Chuan Li	**Room 4 level 5** 9.PS3.8. Novel and hybrid quantum platforms-I Chair: F. González Zalba	**Room level 2** 9.PS3.9. Superconducting devices Chair: E. Lee
(12h15-12h40) 9.PS3.1.1. Jack Harris *New results on magnetically levitated drops of superfluid helium*	(12h15-12h40) 9.PS3.2.1. P. Armitage *Energy relaxation and dynamics in strongly correlated materials*	(12h15-12h40) 9.PS3.3.1. Y. Peng *Electron-Phonon Coupling and Superconducting Gap Symmetry in High-Tc Cuprates*	(12h15-12h40) 9.PS3.4.1. ZX. Shen *Unconventional Superconductivity in Cuprates – Strides Made and Challenges Remain*	(12h15-12h40) 9.PS3.5.1. V. Taufour *Giant field induced unconventional anomalous Hall conductivity in the non-centrosymmetric Weyl metal $CeCoGe_3$*	(12h15-12h40) 9.PS3.6.1. F. Pierre *Observation of the scaling dimension of fractional quantum Hall anyons*	(12h15-12h40) 9.PS3.7.1. Tingxin Li *Fractional quantum anomalous Hall effect and competing quantum phases in twisted $MoTe_2$*	(12h15-12h40) 9.PS3.8.1. Erika Kawakami *Floating Electrons Coupled to Resonators*	(12h15-12h40) 9.PS3.9.1. N. Paradiso *2D arrays of ϕ0-Josephson junctions*
(12h40-13h05) 9.PS3.1.2. D. E. Zmeev *Superflow on the scale of a coherence length*	(12h40-13h05) 9.PS3.2.2. P. W. Phillips *Solving the Mott Problem*	(12h40-13h05) 9.PS3.3.2. J. Tallon *Questioning the cuprate paradigm - absence of superfluid density loss in overdoped cuprates*	(12h40-12h55) 9.PS3.4.2. Y. Aoki *Search for Symmetry-Enforced Dirac Points via Magnetoresistance Quantum Oscillations in Non-Symmorphic Type-I Superconductor beta-$IrSn_4$*	(12h40-12h55) 9.PS3.5.2. E. Maniv *Dark Metastable Conduction Channels near a Metal-Insulator Transition*	(12h40-12h55) 9.PS3.6.2. O. Maillet *Charge equilibration in counter-propagating quantum Hall channels coupled via Landauer reservoirs*	(12h40-12h55) 9.PS3.7.2. A. Braggio *Thermoelectric detection in hybrid and quantum nanodevices*	(12h40-12h55) 9.PS3.8.2. Natalia Morais *Rydberg Tomography of Electrons on Helium in a Linear Microtrap*	(12h40-12h55) 9.PS3.9.2. Xiaoying Xu *Signature of chiral superconductivity evidenced in mesoscopic superconductors*
(13h05-13h30) 9.PS3.1.3. Y. Sasaki *Macroscopic Orbital Supercurrent along the Edge of Chiral Domain in Chiral Superfluid ^3He*	(13h05-13h20) 9.PS3.2.3. J. Luo *Unconventional coherence peak in cuprate superconductors*	(13h05-13h20) 9.PS3.3.3. C-H. Chung *A mechanism for quantum-critical Planckian metal phase in high-temperature cuprate superconductors*	(12h55-13h10) 9.PS3.7.1. T. Singar *Lifshitz transition observed through vortex core spectroscopy in Bi-2212 superconductor*	(12h55-13h10) 9.PS3.5.3. L. Hao *Atomically controlled insulator-to-metal transition in strongly correlated iridate/manganite heterostructures*	(12h55-13h10) 9.PS3.6.3. Ky. Kim *Fractional Quantum Hall Levitons*	(12h55-13h10) 9.PS3.7.3. T. Kato *Microscopic Theory of Spin Current Generation by Chiral Phonons*	(12h55-13h10) 9.PS3.8.3. M. Freeman *Progress Towards a Low Temperature Superfluid 4He Josephson Junction using 2D Nanoporous Materials*	(12h55-13h10) 9.PS3.9.3. A. Mozes *Microwave assisted scanning tunneling microscopy to probe local complex impedance of unconventional superconductors*
			(13h10-13h25) 9.PS3.4.4. Lev V Levitin *Identification of topological superconductivity in YbRh2Si2*	(13h10-13h25) 9.PS3.5.4. M. Zhu *Continuum excitations in a triangular-lattice spin supersolid*			(13h10-13h25) 9.PS3.8.4. Camryn Undershute *Decoherence of Surface Phonons in a Quantum Acoustic System*	(13h10-13h25) 9.PS3.9.4. P. Rout *Induced Superconductivity in Topological Phase of $ZrTe_5$*

13h25-14h00 Lunch

14h00-15h45 Poster session

	Semiplenary Session 4	
	Auditorium level 4. Chair: Lieven Vandersypen	**Luxua 1 level 3. Chair Peter Hirschfeld**
15h45	(15h45-16h20) William Oliver, *Emulating the Bose-Hubbard Model with Arrays of Superconducting Qubits*	(15h45-16h20) Erez Berg, *Exotic Superconductivity in Graphene Multilayers*
16h20	(16h20-16h55) Daniel Loss, *Spin Qubits in Semiconductors for Scalable Quantum Computers*	(16h20-16h55) Roser Valenti, *The revival of Fe-based superconductors: cascades of screening processes and their implications*

16h55-17h25 Coffee

Saturday, 9 August, Afternoon Parallel Sessions

Room level 2 9.PS4.1. Theory and other condensates Chair: L. Tarruell	**Room 1B level 5** 9.PS4.2. Quantum turbulence-I Chair: X. Rojas	**Audit 1 level 4** 9.PS4.3. Graphene and twisted systems-I Chair: E. Berg	**Audit 2 lev. 4** 9.PS4.4. UTe_2-II Chair: D. Aoki	**Luxua 1 level 3** 9.PS4.5. Spin chains, chiral magnets and superconductivity Chair: C. Rogero	**Luxua 2 level 3** 9.PS4.6. Spin Ice and magnetic textures Chair: Y. B. Kim	**Room 1A level 5** 9.PS4.7. Graphene and bound states at surfaces Chair: A. Young	**Room 2 level 5** 9.PS4.8. Josephson Physics Chair: V. Chandrasekhar	**Room 3 level 5** 9.PS4.9. Superconducting quantum circuits-III Chair: E. Kawakami	**Room 4 level 5** 9.PS4.10. LT instrumentation and applications-II Chair: S. Grohmann
(17h25-17h50). 9.PS4.1.1. Jordi Boronat *Self-bound clusters of ultracold polar molecules*	(17h25-17h50). 9.PS4.2.1. L. Galantucci *Quantum vortices leave a macroscopic signature in the thermal background*	(17h25-17h50). 9.PS4.3.1. E. Bascones *Heavy fermions and cascades in twisted bilayer graphene: new results*	(17h25-17h50). 9.PS4.4.1. JP. Paglione *Key issues in understanding the superconductivity of UTe_2*	(17h25-17h50). 9.PS4.5.1. N. Lorente *Topological Character of Cr Spin Chains on Bi_2Pd*	(17h25-17h50). 9.PS4.6.1. S. Raymond *Uncommon magnetic order in the hyperkagome system $Yb_3Ga_5O_{12}$*	(17h25-17h50). 9.PS4.7.1. Chunli Huang *Momentum-Space AC Josephson Effect and Intervalley Coherence in Multilayer Graphene*	(17h25-17h50). 9.PS4.8.1. M. Houzet *Josephson quantum mechanics at odd parity*	(17h25-17h50). 9.PS4.9.1. Angela Kou *Using disordered superconductors to build qubits*	(17h25-17h50). 9.PS4.10.1. D. H. Nguyen *Advancing sensitive measurement techniques for the study of quantum materials at ultralow temperatures*
(17h50-18h05) 9.PS4.1.2. Alberto Villois *Breakdown of Superfluidity in Two-Dimensional Dipolar Bose-Einstein Condensates*	(17h50-18h15) 9.PS4.2.2. Andrei Golov *Quantum Turbulence Sampled by 1-6 μm Particles Down to the T = 0 Limit*	(17h50-18h05) 9.PS4.3.2. D. Zhang *DC and AC Josephson effects in twisted cuprate bicrystals*	(17h50-18h05) 9.PS4.4.2. A. Kreisel *Detecting the nodal superconducting gap structure and topological surface states of UTe_2 with QPI*	(17h50-18h05) 9.PS4.5.2. Y. Masaki *Phase Transitions in Quantum Monoaxial Chiral Magnets under Tilted Magnetic Fields*	(17h50-18h05) 9.PS4.6.2. M. Gomilsek *Anisotropic Spin Dynamics in Centrosymmetric Skyrmion Host Gd_2PdSi_3*	(17h50-18h05) 9.PS4.7.2. M. Banerjee *Graphene antidot in quantum Hall states*	(17h50-18h05) 9.PS4.8.2. F. J. Matute *Quantum circuits with multiterminal Josephson-Andreev junctions*	(17h50-18h05) 9.PS4.9.2. Xi Chen *Optimal Control and Shortcuts to Adiabaticity for Fast Qubit Readout in Circuit Quantum Electrodynamics*	(17h50-18h05) 9.PS4.10.2 Y. Fujii *Development of Simultaneous Detection Method of Millimeter-Wave Electron Spin Resonance and Electrically-Detected Magnetic Resonance Signals of Phosphorous-doped Si*
(18h05-18h20) 9.PS4.1.3. L. Melnikovski *Quantized Vortices in Multi-Component Superfluids*	(18h15-18h30) 9.PS4.2.3 Ken Obara *Superfluid Suction Vortex Generated by Fountain Effect*	(18h05-18h30) 9.PS4.3.3. N. Krane *Engineering and Exploring Spin Excitations and Correlations in Open-Shell Nanographene Systems*	(18h05-18h30) 9.PS4.4.3. B. Ramshaw *Searching for topological superconductivity in UTe_2 using ultrasound*	(18h05-18h20) 9.PS4.5.3. Hao Zheng *Spectroscopy on superconductor carrying a supercurrent*	(18h05-18h20) 9.PS4.6.3. F. Morineau Satisfaction and violation of the fluctuation-dissipation relation in spin ice	(18h05-18h30) 9.PS4.7.2. K. Franke *Wave-function engineering of Yu-Shiba-Rusinov states from magnetic atoms and molecules on superconductors*	(18h05-18h20) 9.PS4.8.3. E. Sonin *Theory of Planar Ballistic SNS Junctions at T = 0*	(18h05-18h30) 9.PS4.9.3. P. Sethi *Scalable Fabrication of High-Performance Superconducting Qubits Using Native-Oxide Passivated Trilayer Junctions*	(18h05-18h20) 9.PS4.10.3. Shuheng Pan Development of an Ultra-Low Temperature High Magnetic Field Dual-Axile Rotational Scanning Tunneling Microscope

Conference dinner at 20h00

Sunday, 10 August

	Auditorium level 4
	Plenary session 3. Chair: Paul C. Canfield
09h30	(09h30-10h15) Claudia Felser, *Chirality, Topology, and Spin-Orbit Interactions in Quantum Materials*
10h15	(10h15-11h00) Wolfgang Wernsdorfer, *Advancements in Cryogenics for Quantum Technologies: Scaling the Cold Frontier*

11h00-11h30 Coffee break and exhibition

	Semiplenary Session 5	
	Auditorium level 4. Chair Sebastian Bergeret	**Luxua 1 level 3. Chair Fernando Luis**
11h30	(11h30-12h05) Jagadeesh Moodera, *Superconductors with Broken Symmetry: Majorana Bound States and Nonreciprocal Current Flow Phenomena in Superconductor-Ferromagnet Proximity Coupled Systems for Collective Quantum Technology*	(11h30-12h05) Natalia Ares, *Machine learning-based control and characterisation of quantum devices*
12h05	(12h05-12h40) Stuart Parkin, *Magnetic Tunnel Junctions and Josephson junctions using 2D van der Waals layers*	(12h05-12h40) Meng Wang, *High-temperature superconductivity in the Ruddlesden-Popper phase of nickelates*
12h40	(12h40-13h15) Seigo Tarucha, *High-Fidelity Qubit Gates and Phase Noise in Silicon Multi-qubit Devices*	(12h40-13h15) Elena Hassinger, *Mysteries of the two-phase superconductor* $CeRh_2As_2$
13h15	(13h15-13h50) Jukka P. Pekola, *Superconducting circuits as a platform for quantum thermodynamics experiments*	(13h15-13h50) Maia G. Vergniory, *The topological revival of Fe-based superconductors*

No lunch box will be offered this day. Time for networking, see also recommended excursions.

Monday, 11 August

	Auditorium level 4
	Plenary session 4. Chair James Sauls
09h00	(09h00-09h45) Päivi Törmä, *Quantum Geometry and Superconductivity*
09h45	(09h45-10h30) Dai Aoki, *Spin-Triplet Superconductivity under Extreme Conditions in UTe_2*

10h30-11h00 Coffee break and exhibition

	Semiplenary Session 6	
	Auditorium level 4. Chair Hongki Xu	**Luxua 1 level 3. Chair Roser Valenti**
11h00	(11h00-11h35) Benjamin Sacépé, *Chiral supercurrent in quantum Hall Josephson junctions*	(11h00-11h35) Jiangping Hu, *Loop Current Order in Strongly Correlated Systems*
11h35	(11h35-12h10) Klaus Ensslin, *Graphene quantum devices*	(11h35-12h10) Naoto Nagaosa, *Nonreciprocal transport and diode effect in superconductors*

12h10-12h15 Room change to parallel sessions

Monday, 11 August, Morning Parallel Sessions

Room 1A level 5 11.PS5.1 He nanomechanics Chair: W. Halperin	**Auditorium level 4** 11.PS5.2 Topological superconductivity-I Chair: G. Pasquini	**Luxua 1 level 3** 11.PS5.3 Superconductivity and magnetism (COST superqumap.eu) Chair: W. Lang	**Luxua 2 level 3** 11.PS5.4 Magnons and superconductivity Chair: R. López	**Room 1B level 5** 11.PS5.5 Kagome magnets Chair: J. Nagl	**Room 2 level 5** 11.PS5.6 2D and quasi-2D Materials Chair: P. Giraldo	**Room 3 level 5** 11.PS5.7 Correlated and low dimensional systems Chair: P. Burset	**Room level 2** 11.PS5.8 Novel and hybrid platforms-II Chair: G. Platero	**Room 4 level 5** 11.PS5.9 Thermometry and refrigeration techniques- I Chair: H. Fukuyama
(12h15-12h40). 11.PS5.1.1. V. Tsepelin *Interaction of NEMS with a Quantum Vortex in Superfluid-4*	(12h15-12h40). 11.PS5.2.1. Y. Tanaka *Theory of full counting statistics in unconventional superconductor junctions*	(12h15-12h40). 11.PS5.3.1. P. Samuely *Ising superconductivity in bulk 4Ha-$NbSe_2$*	(12h15-12h40). 11.PS5.4.1. M. J. Martínez *From Cavity - QED to Van der Waals – QED: magnons instead of photons*	(12h15-12h40). 11.PS5.5.1. S. Suetsugu *Gapless spin excitations and gapped magnetization plateau phases in a spin-1/2 perfect kagome antiferromagnet*	(12h15-12h40). 11.PS5.6.1. H. Bouchiat *Probing orbital currents in 2D materials*	(12h15-12h40). 11.PS5.7.1. A. A. Aligia *Topological quantum phase transition transition to a "non-Landau" Fermi liquid in a two-channel spin-1 anisotropic Kondo model and its experimental relevance*	(12h15-12h40). 11.PS5.8.1 M. Urdampilleta *A foundry-fabricated spin qubit unit-cell with in-situ dispersive readout*	(12h15-12h40). 11.PS5.9.1. Ch. Dimas *Thermal Spectrometer for Superconducting Circuits*
(12h40-12h55) 11.PS5.1.2. Riku Rantanen *Engineering topology in a superfluid through nanoscale confinement*	(12h40-12h55) 11.PS5.2.2. H. Takahashi *Pressure-Induced Structural Anomaly in the Dirac Line-Nodal Material $CaSb_2$*	(12h40-12h55) 11.PS5.3.2. J. Custers *Evidence for Coexistence of Magnetism and Superconductivity in Ce_3PtIn_{11}*	(12h40-12h55) 11.PS5.4.2. S. Catalano *EuS Interfaces for Low Temperature Spintronics*	(12h40-12h55) 11.PS5.5.2. ZA. Xu *Giant Anomalous Hall Effect in Kagome Nodal Surface Semimetal Fe_3Ge*	(12h40-12h55) 11.PS5.6.2. Ch. Zhou *Mapping the Mott and Generalized Wigner Crystal States in Twisted Bilayer MoS_2 by Quantum Well Resonant Tunneling Spectroscopy*	(12h40-12h55) 11.PS5.7.2. T. Novotny *Double quantum dot Andreev molecules: numerical phase diagrams, critical evaluation of effective models, and identification of microscopic mechanisms*	(12h40-12h55) 11.PS5.8.2 Federico Fedele *Spin mechanical coupling and self-oscillations in a carbon nanotube electromechanical resonator*	(12h40-12h55) 11.PS5.9.2. J. Hätinen *Nb-based tunnel junction refrigerators*
(12h55-13h20) 11.PS5.1.3. Oleg Kirichek *^{4}He and ^{3}He – ^{4}He mixture films studied by neutron reflectometry*	(12h55-13h10) 11.PS5.2.3. N. Poniatowski *Detecting induced unconventional superconductivity with cQED*	(12h55-13h10) 11.PS5.3.3. P. Szabo *Disorder- and magnetic field-tuned fermionic superconductor-insulator transition in MoN thin films. Transport and STM studies.*	(12h55-13h10) 11.PS5.4.3. L. Hao *Atomically controlled insulator-to-metal transition in strongly correlated iridate/manganite heterostructures*	(12h55-13h10) 11.PS5.5.3. M. Kato *Magnetism of novel kapellasite-type kagome antiferromagnet InCu3(OH)6Cl3*	(12h55-13h10) 11.PS5.6.3. E. Henriquez *Biaxial Compressive Strain Tuning of Quantum Properties in 2D Materials*	(12h55-13h10) 11.PS5.7.3. J. M. Torres *K·P model for moiré exciton trapping and polarization*	(12h55-13h10) 11.PS5.8.3 Claudio Bonizzoni *Perfect Absorption of Single-Photons for Quantum Technologies*	(12h55-13h10) 11.PS5.9.3. D. Lvov *Thermometry Based on a Superconducting Qubit*
	(13h10-13h25) 11.PS5.2.4. R. Okugawa *Gapless topological superconducting phases in two-dimensional quasicrystals*	(13h10-13h25) 11.PS5.3.4. V. Fomin *Superconductor 3D Nanoarchitectures: A Playground for Novel Quantum Phenomena*	(13h10-13h25) 11.PS5.4.4. A. Badreldin *A 200-mm Superconducting Platform for the Microwave Characterization of Magnetic Materials at Low Temperature*		(13h10-13h25) 11.PS5.6.4. M. R. Calvo *Strain Engineering of Magnetoresistance and Magnetic Anisotropy in CrSBr*	(13h10-13h25) 11.PS5.7.4. K. I. Wysokinski *Hubbard and correlated-hopping interactions in a quantum dot coupled to four or two terminals: non-linear transport coefficients and rectification of charge and heat currents.*	(13h10-13h25) 11.PS5.8.4 Carolina Del Río *Remote polariton-polariton interactions mediated by superconducting circuits for quantum applications*	(13h10-13h25) 11.PS5.9.4. L. Wang *Normal metal Coulomb Blockade Thermometer below 10 mK*

13h25-14h00 Lunch

14h00-15h45 Poster session

	Semiplenary Session 2	
	Auditorium level 4. Chair J.C. Séamus Davis	**Luxua 1 level 3. Chair William Oliver**
15h45	(15h45-16h20) Eun-Ah Kim, *Data-centric Approach to Quantum Materials using AI*	(15h45-16h20) Sebastian Will, *Molecular Quantum Liquids*
16h20	(16h20-16h55) Paul C. Canfield, *Collapsed tetragonal phase transitions as canaries*	(16h20-16h55) Dafei Jin, *Noise-resilient solid host for electron qubits above 100 mK*

16h55-17h25 Coffee

Monday, 11 August, Afternoon Parallel Sessions

Room 1A level 5 11.PS6.1 Superfluid Helium-III Chair: V. Tsepelin	**Auditorium1 level 4** 11.PS6.2 Nickelate, Kagome and other topical superconductors Chair: P. Szabo	**Auditorium2 level 4** 11.PS6.3 Collective modes and Quantum criticality Chair: H. Yuan	**Luxua1 level 5** 11.PS6.4 Vortex lattices and nanostructures (COST superqumap.eu) Chair: P. Samuely	**Luxua2 level 5** 11.PS6.5 Correlated materials-II Chair: M. Menghini	**Room 1B level 5** 11.PS6.6 Magnetism and Exotic Spin States Chair: S. Raymond	**Room 2 level 5** 11.PS6.7 Quantum Transport-II Chair: M.J. Martínez	**Room 3 level 5** 11.PS6.8 Superconducting devices/van der Waals materials Chair: H. Bouchiat	**Room level 2** 11.PS6.9 QC with semiconductor circuits Chair: A. Kou	**Room 4 level 5** 11.PS6.10 Thermometry and refrigeration techniques-II Chair: A. Camón
(17h25-17h50). 11.PS6.1.1. W. Halperin *Magnetic susceptibility enhancement of superfluid ^{3}He-B in anisotropic confinement*	(17h25-17h50). 11.PS6.2.1. D. Feng *Electronic, magnetic and optical properties of the nickelate superconductors.*	(17h25-17h50). 11.PS6.3.1. Mo. Randeria *Andreev versus Tunneling Spectroscopy in Unconventional Flat Band Superconductors*	(17h25-17h50). 11.PS6.4.1. G. Pasquini *Exploring the interplay between nematicity and superconductivity*	(17h25-17h50). 11.PS6.5.1. H-Y. Kee *Microscopic Roadmap to a Kitaev-Yao-Lee Spin-Orbital Liquid*	(17h25-17h50). 11.PS6.6.1. J. Nagl *Ground-State Selection and Braided Ising Spin-Tubes in a new Family of Breathing Kagome Magnets*	(17h25-17h50). 11.PS6.7.1. R. López *Quantum Kinetic Uncertainty Relations in Mesoscopic Conductors at Strong Coupling*	(17h25-17h50). 11.PS6.8.1. P. Burset *Single-Electron Charge Pulses in Superconducting Devices*	(17h25-17h50). 11.PS6.9.1. G. Burkard *The singlet-triplet and exchange-only flopping-mode spin qubits*	(17h25-17h50). 11.PS6.10.1. H. Fukuyama *The Continuous Sub-millikelvin Refrigerator*
(17h50-18h15) 11.PS6.1.2. Priya Sharma *Towards a micromechanical qubit based on quantized oscillations in superfluid helium*	(17h50-18h05) 11.PS6.2.2. Q. Niu *Nematicity and orbital current order probed by transverse resistivity in Kagome metal thin flakes*	(17h50-18h05) 11.PS6.3.2. H. Watanabe *Theory of BCS-BEC Crossover in Strongly Correlated Electron Systems*	(17h50-18h05) 11.PS6.4.2. A. Palau *Field-Induced Phase Transitions in Cuprate Superconductors for Cryogenic in-Memory Computing*	(17h50-18h05) 11.PS6.5.2. S. Mishra *Simultaneous optical and thermodynamic investigation of $Ca_3Ru_2O_7$*	(17h50-18h05) 11.PS6.6.2. K. Aoyama *Asymmetric spin-wave dispersion in a triple-Q chiral state of a breathing-kagome antiferromagnet*	(17h50-18h05) 11.PS6.7.2 Yu. Makhlin *Planar topological-insulator based Josephson junctions and Majorana zero modes*	(17h50-18h05) 11.PS6.8.2. M. Moskalets *An e-h superposition created on demand*	(17h50-18h05) 11.PS6.9.2. I. Fernández de Fuentes *Running a six-qubit algorithm on a silicon spin qubit array*	(17h50-18h05) 11.PS6.10.2. Y. Shimura *Application of Adiabatic Demagnetization Refrigeration by Enlarged $YbCu_4Ni$ Alloy under Sub-Kelvin Temperature Region*
(18h15-18h40) 11.PS6.1.3. X. Rojas *Novel platforms for superfluid optomecanics*	(18h05-18h20) 11.PS6.2.3. X. Feng *Rotational symmetry breaking within the fully-gapped superconducting state in kagome metal CsV_3Sb_5*	(18h05-18h20) 11.PS6.3.3. S. Trivini *Role of Superconductor/graphene interface conductance in proximity effect*	(18h05-18h20) 11.PS6.4.3. W. Lang *Tailoring Vortex Behavior in High-Tc Superconductors via Periodic Defects Created by Focused Helium Ion Beams*	(18h05-18h20) 11.PS6.5.3. T. Mito *Origin of Low-Temperature Magnetic Fluctuations in Kondo Insulator SmB_6 studied by 10B- and 11B-NMR measurements*	(18h05-18h20) 11.PS6.6.3. S. A. Zvyagin *High-field magnetic properties of the alternating ferro-antiferromagnetic spin-1/2 chain compound Cu2(OH)3Br*	(18h05-18h20) 11.PS6.7.3. L. Magazzu *Thermal rectification in a qubit-oscillator system*	(18h05-18h20) 11.PS6.8.3. M. Ilyn *Epitaxial Van der Waals Heterostructures Magnetic Transition Metal Dihalides / Superconductor 2H-$NbSe_2$*	(18h05-18h20) 11.PS6.9.3. K. Castoria *Single Surface-Electron Sensing and CMOS Control Above 1 Kelvin*	(18h05-18h20) 11.PS6.10.3. J. Kölling *Accelerating cryogenic testing and characterization of quantum materials and devices with novel ADR cryostats*
(18h40-19h05) 11.PS6.1.4 P. Stasiak *Experimental and theoretical evidence of universality in vortex reconnections*	(18h20-18h45) 11.PS6.2.4 Xianhui Chen *Superconductivity and density wave transition in Ruddlesden–Popper phase nickelates*	(18h20-18h45) 11.PS6.3.4 D. Manske *Higgs Spectroscopy of Superconductors*	(18h20-18h45) 11.PS6.4.4 M. Milosevic *Advances in multiphysics simulations of superconducting electronics*	(18h20-18h45) 11.PS6.5.4 Y. Fasano *How do atomic defects alter the electronic properties of Fe-based superconductors?*	(18h20-18h45) 11.PS6.6.4 Y. B. Kim *Fractionalized excitations and emergent photons in dipolar-octupolar quantum spin ice*	(18h20-18h45) 11.PS6.7.4 R. Seoane *Towards Ideal Supercurrent Rectification in Josephson Junctions*	(18h20-18h45) 11.PS6.8.4 G. Chen *Correlated and topological states in ABC-stacking multilayer graphene*	(18h20-18h45) 11.PS6.9.4 F. Gonzalez Zalba *A quantum processor based on silicon spin qubits*	(18h20-18h45) 11.PS6.10.4 M. Klinger *Frustrated magnets for milli-Kelvin refrigeration*
	(18h45-19h10) 11.PS6.2.5 M. Isobe *Crystal Growth of Nickelates for Potential High-Tc Superconductors*	(18h45-19h10) 11.PS5.3.5. F. Massee *Hund's assisted multi-channel quantum phase transition in Fe(Se,Te)*	(18h45-19h10) 11.PS6.4.5. D. Popovic *Persistence of Vortexlike Phase Fluctuations in Underdoped to Heavily Overdoped Bi-2201 Cuprates*	(18h45-19h10) 11.PS6.5.5. A. McCollam *Fermi surface reconstruction and non-Fermi liquid behavior near the ferromagnetic quantum phase transition in Fe(Ga1-xGex)3*	(18h45-19h00) 11.PS6.6.5. S. D. Nabi *Magnetic phase diagram and model Hamiltonian of Cs2RuO4*	(18h45-19h10) 11.PS6.7.4 K-H Chiang *Dual-qubit heat valve: an experimental study on collective quantum heat transport*	(18h45-19h10) 11.PS6.8.5. Wei Li *Interplay between Stripe-like Charge orders, Electronic Correlation and Majorana Bound States in 2M-WS_2*	(18h45-19h00) 11.PS6.9.5. Elizaveta Morozova *Onset of a quantum phase transition in a germanium quantum dot ladder*	(18h45-19h10) 11.PS6.10.5. D. Szewczyk *Heat Capacity Investigations of Benzene Derivatives: Exploring the Mechanism Behind Glassy Anomalies in Quasiplanar Molecular Crystals*

Tuesday, 12 August

	Auditorium level 4
	Plenary session 4. Chair Jean Pascal Brison
09h00	(09h00-09h45) Joseph Checkelsky, *Natural Superlattice Materials and Modulated Superconductivity*
09h45	(09h45-10h30) Xingjiang Zhou, *Laser ARPES on Pairing Symmetry and High-Tc Origin in High Temperature Superconductors*

10h30-11h00 Coffee break and exhibition

	Semiplenary Session 6	
	Auditorium level 4. Chair Makoto Tsubota	**Luxua 1 level 3. Chair Benjamin Sacépé**
11h00	(11h00-11h35) JP Davis, *Superfluid ^{3}He Electromechanics*	(11h00-11h35) Ramón Aguado, *Novel qubits based on hybrid semiconductor-superconductor Josephson junctions*
11h35	(11h35-12h10) Yong-Hamb Kim, *Magnetic microcalorimeters for large-scale astroparticle physics applications*	(11h35-12h10) Christoph Strunk, *Berezinski-Kosterlitz-Thouless transition in strongly disordered NbN films close to the localization threshold*

12h10-12h15 Room change to parallel sessions

Tuesday, 12 August, Morning Parallel Sessions

Room 1A level 5 12.PS7.1. Quantum turbulence II Chair: J. Taniguchi	**Auditorium level 3** 12.PS7.2. Kagome SC Chair: H. H. Wen	**Luxua1 level 4** 12.PS7.3. Thin film and interfaces-II (COST superqumap.eu) Chair: J. Custers	**Luxua2 level4** 12.PS7.4. Correlated materials-III Chair: Y. Fasano	**Room 1B level 5** 12.PS7.5. Strongly correlated magnets-II Chair: F. Assaad	**Room 2 level 5** 12.PS7.6. Physical Effects in Nanoscale and Quantum Materials Chair: G. Katsaros	**Room 3 level 5** 12.PS7.7. Josephson and hybrid superconducting systems Chair: M. Houzet	**Room level 2** 12.PS7.8. Novel and hybrid platforms-III Chair: M. Urdampilleta	**Room 4 level 5** 12.PS7.9. Thermometry and refrigeration techniques-III Chair: M. A. Ramos
(12h15-12h40). 12.PS7.1.1. Ryuji Nomura *Quantum Dripping of Superfluid Pendant Droplets*	(12h15-12h40). 12.PS7.2.1 R. Tazai Multi-stage Phase Transitions and Non-Reciprocal Transport in Kagome Superconductors AV_3Sb_5	(12h15-12h40). 12.PS7.3.1 F. Lombardi *Ground State Engineering in Ultrathin YBCO via Nanostructured Surfaces: Enhanced Superconductivity, Nematicity, and Unidirectional Charge Order*	(12h15-12h40). 12.PS7.4.1 M. Menghini *Mott resistive switching in an antiferromagnetic insulator initiated by topological defects*	(12h15-12h40). 12.PS7.5.1 G. Causer *One-dimensional magnetic soliton layers in a cubic chiral magnet*	(12h15-12h40). 12.PS7.6.1 Ma. Naka *Spin-splitting and cross-correlation in altermagnets*	(12h15-12h40). 12.PS7.7.1 V. Chandrasekhar *Searching for signatures of non-trivial topology in diffusive, multiterminal Josephson junctions*	(12h15-12h40). 11.PS7.8.1. G. Platero *Topological edge states for quantum information transfer*	(12h15-12h40). 12.PS7.9.1 J. Huang *Development of a new magnetic refrigeration method for achieving low temperatures below one-Kelvin without using the helium-3*
(12h40-12h55) 12.PS7.1.2 H. Takeuchi *Eccentric fractional skyrmions from quantum Kelvin-Helmholtz instability*	(12h40-12h55) 12.PS7.2.2 B.-C. Lin *Spin-polarized p-wave superconductivity in the kagome material RbV_3Sb_5*	(12h40-12h55) 12.PS7.3.2 Yufan Li *Determination of spin-triplet superconductivity with phase-sensitive experiments*	(12h40-12h55) 12.PS7.4.2 V. F. Mitrovic *Orbital glass conceals missing magnetic entropy in a relativistic Mott insulator*	(12h40-12h55) 12.PS7.5.2 G. Kaur *Magnetoelastic dynamics in Spin-Jahn Teller driven antiferromagnet: CoTi2O5*	(12h40-12h55) 12.PS7.6.2 R. Dolleman *Continuous sub-millikelvin cooling of nanoelectronic devices using a Wigner crystal*	(12h40-12h55) 12.PS7.7.2 M. Ferrier *Supercurrent noise in a phase-biased superconductor - normal ring in thermal equilibrium*	(12h40-12h55) 11.PS7.8.2. Pomaransk David *Time-bin architecture for electronic qubits with quantum-Hall edge channels*	(12h40-12h55) 12.PS7.9.2 S. Guo *Quantum Fluctuation enhanced Millikelvin Magnetic Refrigeration in Triangular Lattice Magnet*
(12h55-13h10) 12.PS7.1.3 Yosuke Minowa *Kelvin wave excitation on quantized vortices in superfluid helium*	(12h55-13h10) 12.PS7.2.3 S. Yonezawa *Field-angle-resolved calorimetry of the pristine and Nb-substituted CsV_3Sb_5 Kagome superconductors*	(12h55-13h10) 12.PS7.3.3 Che-H Ku *Point-contact Andreev-reflection spectroscopy of compressed superconducting thin flakes inside a diamond anvil cell*	(12h55-13h10) 12.PS7.4.3 C. Lee *Odd-parity itinerant antiferromagnets by space group symmetry*	(12h55-13h10) 12.PS7.5.3 K. Fukui *Unveiling new magnetic phases in 3D extended Kitaev models*	(12h55-13h10) 12.PS7.6.3 A. Delattre *Low temperature fluctuations of a mesoscopic mechanical mode*	(12h55-13h10) 12.PS7.7.3 J. A. Moreno *Feedback driven Josephson microscope*	(12h55-13h10) 11.PS7.8.3. Li Lu *Experimental exploration of the Fu-Kane scheme of topological quantum computation*	(12h55-13h10) 12.PS7.9.3 Clement Geffroy *An ultra-compact dilution refrigerator for rapid quantum device characterization and education*
(13h10-13h25) 12.PS7.1.4 Igor Todoshchenko *Quantum fluctuations in helium adsorbed on nanotube*	(13h10-13h25) 12.PS7.2.4 H. Kontani *Unconventional density waves, exotic superconductivity and quantum criticality in kagome metals and bilayer nickelate superconductors*	(13h10-13h25) 12.PS7.3.4 K. Ienaga *Quantum and Thermal Fluctuations in Two-Dimensional Superconductors studied by the Nernst effect*	(13h10-13h25) 12.PS7.4.4 YM. Xie *Photon-drag photovoltaic effects and quantum geometric nature*	(13h10-13h25) 12.PS7.5.4 S. Gabani *Evidence for ferrons formation in the heavy fermion metal CeB6 with dynamic charge stripes*	(13h10-13h25) 12.PS7.6.4 Zh. Hu *Local Characterization of Electric Field Induced Dielectric Constant Changes in $(Ba,Sr)TiO_3$ Detected by Microwave Impedance Microscopy*	(13h10-13h25) 12.PS7.7.4 Andrei Mazanik *Interfacial spin-orbit coupling in superconducting hybrid systems*	(13h10-13h25) 11.PS7.8.4. Giacomo Marmorini *Spiral quantum state tomography of quantum many-body states and entanglement measurement*	(13h10-13h25) 12.PS7.9.4 A. Fefferman *Aluminum nuclear-demagnetization refrigerator for continuous cooling below 1 mK*

13h25-14h00 Lunch

14h00-15h45 Poster session

	Semiplenary Session 7	
	Auditorium level 4. Chair Floriana Lombardi	**Luxua 1 level 3. Chair Richard Haley**
15h45	(15h45-16h20) Rebeca Ribeiro, *Impact of the angular alignment on the crystal field and intrinsic doping of bilayer graphene/BN heterostructures*	(15h45-16h20) Makoto Tsubota, *Quantum Hydrodynamics and Turbulence: A Journey from Legacy to Future*
16h20	(16h20-16h55) Javad Shabani, *Gate-tunable Superconducting Diode Effect*	(16h20-16h55) Vladimir Eltsov, *Nanomechanical probes of vortex dynamics in quantum fluids*

16h55-17h25 Coffee

Tuesday, 12 August, Afternoon Parallel Sessions

Room 1A level 5 12.PS8.1. Superfluid helium-IV Chair: M. Arrayas	**Audit 1 level 4** 12.PS8.2. Thin films and interfaces-III (COST superqumap.eu) Chair: Th. Bauch	**Audit 2 level 4** 12.PS8.3. Oxides and arsenides Chair: E. Hassinger	**Luxua 1 level 5** 12.PS8.4. Nickelates-II Chair: D. Feng	**Luxua 2 level 5** 12.PS8.5. Topological States, and Anomalous Hall Effect Chair: S. Suetsugu	**Room 2 level 5** 12.PS8.6. Topology and Quantum Materials-III Chair: J. Haruyama	**Room 1B level 5** 12.PS8.7. Topological and unconventional superconductivity Chair: Shuqiu Wang	**Room 3 level 5** 12.PS8.8. Low dimensional systems Chair: Ma. Naka	**Room level 2** 12.PS8.9. Superconducting quantum circuits-IV Chair: G. Burkard	**Room 4 level 5** 12.PS8.10. LT detectors-II Chair: J. Huang
(17h25-17h50). 12.PS8.1.1. Junko Taniguchi *Property of superfluid and flow of ^{4}He confined in a nanometer-sized channel*	(17h25-17h50). 12.PS8.2.1. M. Iavarone *Engineering Nb-Au Interfaces for Superconducting Qubits*	(17h25-17h50). 12.PS8.3.1. Y. Maeno *Bridging various strain-related responses of superconducting Sr_2RuO_4*	(17h25-17h50). 12.PS8.4.1. K. Kuroki *Theoretical study on high Tc unconventional superconductivity in multilayer nickelates $La_3Ni_2O_7$ and $La_4Ni_3O_{10}$*	(17h25-17h50). 12.PS8.5.1. P. Giraldo *Fermiology of the charge density wave compound $TaTe_4$ and its signatures of non-trivial topological states*	(17h25-17h50). 12.PS8.6.1. Wei-Li Lee *Nonlinear and nonreciprocal transport effects in untwinned thin films of topological Weyl metal $SrRuO_3$*	(17h25-17h50). 12.PS8.7.1. M. A. Cazalilla *Probing Magnetic and Triplet Correlations in Spin-Split Superconductors with Magnetic Impurities*	(17h25-17h50). 12.PS8.8.1. G. Katsaros *Charge and spin in planar Germanium*	(17h25-17h50). 12.PS8.9.1. S. Gasparinetti	(17h25-17h50). 12.PS8.10.1. S. Kubatkin *Sensing microwave photons with scalable epitaxial graphene bolometers*
(17h50-18h05) 12.PS8.1.2. Igor Zaliznyak *Bogolyubov-Feynman-Pitaevskii spectrum and decays of phonon-roton quasiparticles in superfluid helium*	(17h50-18h05) 12.PS8.2.2. N. Fridman *Anomalous Thickness Dependence of the Vortex Pearl Length in Few-Layer $NbSe_2$*	(17h50-18h05) 12.PS8.3.2. I. Sochnikov *Superelastic Microstructures of Superconducting Strontium Titanate*	(17h50-18h05) 12.PS8.4.2. Y.-T. Hsu *Transport phase diagram and anomalous metallicity in superconducting infinite-layer nickelates*	(17h50-18h05) 12.PS8.5.2. H. Ishizuka *Chirality-related anomalous hall effect in pyrochlore magnets*	(17h50-18h05) 12.PS8.6.2. A. Devillez *Bond-dependent interactions and ill-ordered state in the honeycomb cobaltate $BaCo_2(AsO_4)_2$*	(17h50-18h05) 12.PS8.7.2. V. Kornich *Non-Hermitian superconductivity: stability, generation and detection*	(17h50-18h05) 12.PS8.8.2. A. Hüttel *Transport spectroscopy of MoS_2 nanotube quantum dots*	(17h50-18h05) 12.PS8.9.2. Shohei Miyakoshi *Advancing Quantum Circuit Optimization Through Density Matrix Renormalization Group Techniques*	(17h50-18h05) 12.PS8.10.2. K. Ramos *Development of photon detectors based on granular aluminum superconducting resonators*
(18h05-18h20) 12.PS8.1.3. Emil Varga *Decay of Two-Dimensional Quantum Turbulence*	(18h05-18h20) 12.PS8.2.3. M. Šindler *Vortex mass in high-Tc superconductors*	(18h05-18h30) 12.PS8.3.3. Changhee Lee *Superconductivity and Antiferromagnetism in $CeRh_2As_2$: Unification through type-II van Hove singularity*	(18h05-18h20) 12.PS8.4.3. D. Yao *Models and superconductivity of bilayer and trilayer nickelate superconductors*	(18h05-18h20) 12.PS8.5.3. S. Chowdhury *Understanding the Quantum Anomalous Hall Effect (QAHF) in 2D-UOTe*	(18h05-18h20) 12.PS8.6.3. M. A. Ramos *Quest for amorphous superconductors of Bi–Sb alloys by irradiation with swift heavy ions*	(18h05-18h20) 12.PS8.7.3. C. González *Signatures of edge states in antiferromagnetic van der Waals Josephson junctions*	(18h05-18h20) 12.PS8.8.3. A. Loh *Microwave optomechanics with a carbon nanotube nano-electromechanical resonator*	(18h05-18h30) 12.PS8.9.3. S. Kono *Scalable Superconducting Circuit Optomechanics with Millisecond Quantum Coherence*	(18h05-18h20) 12.PS8.10.3. C. Pobes *Cryogenic radiation detectors base on Transition Edge Sensors*
(18h20-18h45) 12.PS8.1.4. Ladislav Skrbek *Critical Velocities in Flows of Superfluid ^{4}He*	(18h20-18h45) 12.PS8.2.4. M. Eschrig *Purely even harmonic Josephson currents due to crossed equal-spin pair transmission*	(18h30-18h55) 12.PS8.3.4. J. Landaeta *Quantum oscillations of Sr_2RuO_4 under c-axis uniaxial stress*	(18h20-18h45) 12.PS8.4.4. H. Yuan *From Heavy Fermions to Nickelates: Superconductivity, Quantum Criticality, and Strange Metals*	(18h20-18h45) 12.PS8.5.4. N. Trivedi *Detection of anyon braiding through pump-probe spectroscopy*	(18h20-18h45) 12.PS8.6.4. M. Klanjsek *Kitaev and Dirac Quantum Spin Liquids in Honeycomb Magnets*	(18h20-18h45) 12.PS8.7.4. J. Klinovaja *From perfect to imperfect poor man's Majoranas in minimal Kitaev chains*	(18h20-18h45) 12.PS8.8.4. G. Csathy *Non-Coulombic Short-Range Potentials and Competing Orders in the Two-dimensional Electron Gas*	(18h30-18h55) 12.PS8.9.4. W. Poirier *A primary quantum current standard for the Ampere*	(18h20-18h45) 12.PS8.10.4. D.B. Tanner *Search for dark-matter axions*
(18h45-19h00) 12.PS8.1.5. L. Cavicchioli *Formation of Multiple Quantum Droplets through Capillary Instability*	(18h45-19h00) 12.PS8.2.5. M. Zgirski *A single superconducting vortex on a leash.*	(18h55-19h20) 12.PS8.3.5. H. M. Noad *Thermodynamic Measurements of Sr_2RuO_4 under Uniaxial Stress*	(18h45-19h00) 12.PS8.4.5. D. Inoue *Unconventional SDW+CDW order and superconductivity in bilayer nickelate: intra/inter-layer bond-order fluctuations mediated pairing mechanism*	(18h45-19h00) 12.PS8.5.5. G. Gervais *Observation of Temperature-Independent Anomalous Hall Effect in Thin Bismuth from Near Absolute Zero to 300 K Temperature*					

Wednesday, 13 August

	Auditorium level 4 (900)
	Plenary session 4. Chair Francisco (Paco) Guinea
09h00	(09h00-09h45) Jim Sauls, *The Left Hand of the Electron in Chiral Superfluids and Superconductors*
09h45	(09h45-10h30) Pablo Jarillo Herrero, *The Magic of Moiré Quantum Matter*

10h30-11h00 Coffee break and exhibition

Room 1A level 5 13.PS9.1. Interactions and condensates Chair: F. Sols	**Luxua2 level 4** 13.PS9.2. Cuprates-II Chair: M. Milosevic	**Luxua1 level 4** 13.PS9.3. Thin films and interfaces-IV Chair: S. Kubatkin	**Auditorium level 3** 13.PS9.4. Graphene and twisted systems-II Chair: D. Geshkenbein	**Room 1B level 5** 13.PS9.5. Topology and Quantum Materials-IV Chair: M. Vergniory	**Room 2 level 5** 13.PS9.6. Unconventional Effects in Superconducting Junctions Chair: T. Löfwander	**Room 3 level 5** 13.PS9.7. Topology and quantum transport Chair: M. A. Cazalilla	**Room level 2** 13.PS9.8. Quantum simulation Chair: W. Poirier	**Room 4 level 5** 13.PS9.9. Thermometry and refrigeration techniques-IV Chair: D. B. Tanner
(11h00-11h25). 13.PS9.1.1. Lev Haldar Kendrick *Emergent physics at ultralow temperatures in a Fermi-Hubbard quantum simulator*	(11h00-11h25). 13.PS9.2.1. J. Villegas *Persistent photoresponse of oxide superconductors*	(11h00-11h25). 13.PS9.3.1. J. Wang *Discovery of higher charge superconductivity beyond charge-2e Cooper pairs*	(11h00-11h25). 13.PS9.4.1. D. Efetov	(11h00-11h25). 13.PS9.5.1. M. Sato *Callan-Rubakov effects in topological insulators*	(11h00-11h25). 13.PS9.6.1. F. Qu *Boundary supercurrent and continuous non-integer Shapiro steps in $NiTe_2$-based Josephson junctions*	(11h00-11h25). 13.PS9.7.1. C. Spanslatt *Electrical noise spectroscopy of magnons in a quantum Hall ferromagnet*	(11h00-11h25). 13.PS9.8.1. Yu-Ao Chen *Quantum Simulation with Ultracold Atoms*	(11h00-11h25). 13.PS9.9.1. R. Haley *Cooling nanoelectronic devices to the sub-mK regime*
(11h25-11h50) 13.PS9.1.2. Daniel Barredo *Exploring quantum magnetism with dipolar Rydberg atom arrays*	(11h25-11h50) 13.PS9.2.2 D. Leboeuf *Strange metal and spin fluctuations in cuprate superconductors*	(11h25-11h50) 13.PS9.3.2 X. Qiu *Visualization of skyrmion-superconducting vortex pairs in a chiral magnet-superconductor heterostructure*	(11h25-11h50) 13.PS9.4.2 F. Guinea *Superconductivity in graphene stacks*	(11h25-11h50) 13.PS9.5.2 M. Uchida *In-plane anomalous Hall effect in magnetic Weyl semimetal films*	(11h25-11h50) 13.PS9.6.2 P. Hakonen *Experiments on 1/f noise in normal and superconducting low-dimensional conductors*	(11h25-11h50). 13.PS9.7.2. A. Levy Yeyati	(11h25-11h50) 13.PS9.8.2 Haohua Wang *Multiqubit superconducting platform for simulating quantum many-body physics*	(11h25-11h50) 13.PS9.9.2 A. Casey *Immersion cooling quantum materials and quantum devices to sub-mK*
(11h50-12h05) 13.PS9.1.3. D. Yamamoto *Entropy engineering in SU(N) cold atoms for simulating strongly correlated electron systems*	(11h50-12h05) 13.PS9.2.3. J. E. Hirsch *Unanswered questions raised by the Meissner effect and proposed answers*	(11h50-12h05) 13.PS9.3.3. L. Greene *Planar Tunnel Spectroscopy of $CeCoIn_5$: Investigation of local-moment pairing.*	(11h50-12h05) 13.PS9.4.3. Zh. Zhan *Robust flat bands in twisted trilayer graphene*	(11h50-12h05) 13.PS9.5.3. K. Frei *Half-quantized Hall Plateaus in the Confined Geometry of Graphene*	(11h50-12h05) 13.PS9.6.3. S. Kobayashi *Phase control of fermion parity in a quantum dot Josephson junction*	(11h50-12h05) 13.PS9.7.3 A. Wang *Observation of topological Anderson Chern insulator phase in $MnBi_4Te_7$ monolayer*	(11h50-12h05) 13.PS9.8.3. Yue Ban *Digital Quantum Simulation of Fermionic Lattice Models with Counterdiabatic Ansatz*	(11h50-12h05) 13.PS9.9.3 O. Sharifi *Cooling and thermometry of a semiconductor 2D gas down to 1 mK*

12h05-12h10 Move to Auditorium level 4

	Auditorium Level 4
	Award of IUPAP early career scientist prize in low temperature physics. Presenter Richard Haley
12h10	(12h10-12h40) Anasua Chatterjee, *Increasing the complexity of semiconductor quantum devices*
12h40	(12h40-13h10) Bayan Karimi, *Bolometric measurements on superconducting quantum thermodynamic setups*
13h10	(13h10-13h40) Shuqiu Wang, *Quasiparticle Scattering Interference Imaging of Topological Superconductivity in UTe_2*
13h40	**Closing**