



30th International Conference on Low Temperature Physics

7-13 August 2025, Bilbao, Spain

Thursday, 7 August, Day 1

13h00	Arrival and registration
	Auditorium Level 4
14h15	Opening
	Award of Fritz London Memorial Prize. Presenter Pertti Hakonen
14h30	(14h30-15h15) Robert Hallock, <i>Toward an Understanding of solid 4He</i>
15h15	(15h15-16h00) John Saunders, <i>Quantum Materials and Sensors into the Microkelvin Regime</i>
16h00	(16h00-16h45) Ali Yazdani, <i>Emergent quantum phenomena under the microscope</i>

16h45-17h15 Coffee break

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

18h45-20h00 Welcome reception

Friday, 8 August, Day 2

	Auditorium level 4
	Plenary session 1. Chair: Michele Modugno
09h00	(09h00-09h45) Francesca Ferlaino, <i>Supersolids in Magnetic Gases: From Roton Softening to Quantum Vortices</i>
09h45	(09h45-10h30) William Oliver, <i>Emulating the Bose-Hubbard Model with Arrays of Superconducting Qubits</i>

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, <i>Quantum coarsening and criticality on a programmable quantum simulator</i>	(11h00-11h35) Amir Yacoby, <i>Local Probes of Spin Excitations in Quantum Matter</i>
11h35	(11h35-12h10) Mikko Möttönen, <i>Millikelvin electronics for quantum computing and sensing</i>	(11h35-12h10) Shahal Ilani, <i>The Quantum Twisting Microscope: Visualizing Waves in Quantum Matter</i>

12h10-12h15 Room change to parallel sessions

Friday, 8 August, Morning Parallel Sessions

Room 1B level 5 8.PS1.1 Superfluid helium-I Chair: Robert Hallock	Luxua 1 level 3 8.PS1.2 Nickelates-I Chair: Yoshiteru Maeno	Auditorium level 4 8.PS1.3 UTe ₂ -I Chair: Johnpierre Paglione	Room 1A level 5 8.PS1.4 Strongly correlated magnets-I Chair: Valentin Taufour	Luxua 2 level 3 8.PS1.5 Topology and quantum materials-I Chair: Cory Dean	Room 2 level 5 8.PS1.6 Superconducting properties and devices Chair: Vidya Madhavan	Room level 2 8.PS1.7 Electron interactions and quantum interference Chair: Gleb Finkelstein	Room 3 level 5 8.PS1.8 Superconducting quantum circuits-I Chair: Nicolas Roch	Room 4 level 5 8.PS1.9 Low temperature instrumentation & applications-I Chair: Beena Kalisky
(12h15-12h40). 8.PS1.1.1. Jere Mäkinen <i>Time crystal optomechanics</i>	(12h15-12h40) 8.PS1.2.1. Jun Zhao <i>Superconductivity in pressurized trilayer nickelate single crystals</i>	(12h15-12h40) 8.PS1.3.1. Jean-Pascal Brison <i>Field and Pressure-induced Superconducting Phases in UTe₂</i>	(12h15-12h40) 8.PS1.4.1. Fakher Assaad <i>Dimensional mismatch Kondo systems</i>	(12h15-12h40) 8.PS1.5.1. Adolfo G. Grushin <i>Enforcing topology in non-crystalline metals</i>	(12h15-12h40) 8.PS1.6.1. Rais Shaikhaidarov <i>Development of superconducting Bloch Transistor.</i>	(12h15-12h40) 8.PS1.7.1. Masayuki Hashisaka <i>Mach-Zehnder interference of fractionalized electron-spin excitations</i>	(12h15-12h40) 8.PS1.8.1. Ioan Pop <i>Superconducting Qubits Resilient to Tesla-Scale Magnetic Fields</i>	(12h15-12h40) 8.PS1.9.1. Sebastian de Graaf <i>In-situ structural and chemical identification of material defects in superconducting quantum circuits at mK temperatures</i>
(12h40-12h55) 8.PS1.1.2 Carlos Uriarte <i>Quantum Turbulence in ⁴He Characterized by a Superconducting Levitator Probe</i>	(12h40-12h55) 8.PS1.2.2. Seiichiro Onari <i>Analysis of non-fermi-liquid transport phenomena in thin-film bilayer nickelate La₃Ni₂O₇</i>	(12h40-12h55) 8.PS1.3.2. Arthur Carlton-Jones <i>Microwave Electrodynamics and Low-Energy Excitations of Superconducting UTe₂</i>	(12h40-12h55) 8.PS1.4.2. Kirill Povarov <i>Pressure-induced ordering in the gapped quantum magnet DTN</i>	(12h40-12h55) 8.PS1.5.2. Lukasz Luszynski <i>Effect of uniaxial stress on the magnetostriction of Weyl semimetal TaAs</i>	(12h40-12h55) 8.PS1.6.2. Tadeusz Domanski <i>Non-equilibrium signatures of electron pairing in quantum dots coupled to superconductors</i>	(12h40-12h55) 8.PS1.7.2. Vyacheslavs Kashcheyevs <i>Evidence of Coulomb liquid phase in a few-electron droplets</i>	(12h40-12h55) 8.PS1.8.2. Heorhii Bohuslavskiy <i>Superconducting-transistor technology based on CVD graphene: toward superconducting integrated circuits</i>	(12h40-12h55) 8.PS1.9.2. Ankit Sharma <i>Cryogenic SPM tools for magnetic imaging: MFM and NV magnetometry</i>
(12h55-13h10) 8.PS1.1.3 David Schmoranzer <i>Discrete dissipation events measured with Si microwires in pure superfluid ⁴He</i>	(12h55-13h10) 8.PS1.2.3. Fu-Chun Zhang <i>Self-doped molecular Mott insulator for superconducting La₃Ni₂O₇</i>	(12h55-13h10) 8.PS1.3.3. Timothée Vasina <i>Identity of the High-Field and High-Pressure Superconducting Phases in UTe₂</i>	(12h55-13h10) 8.PS1.4.3. Kartik Panda <i>Raman spectroscopy of the magnetic coupling in Gd-i-MAX</i>	(12h55-13h20) 8.PS1.5.3. Prasanna Rout <i>Induced Superconductivity in Topological Phase of ZrTe₅</i>	(12h55-13h10) 8.PS1.6.3. Jie Shen <i>Evidence of p-wave Pairing in K₂Cr₃As₃ Superconductors from Phase-sensitive Measurement</i>	(12h55-13h20) 8.PS1.7.3. Andrey Chubukov <i>Isospin orders and superconductivity in graphene multilayers</i>	(12h55-13h10) 8.PS1.8.3. Ekaterina Mukhanova <i>1/f phase noise in traveling wave parametric amplifier</i>	(12h55-13h10) 8.PS1.9.3. Avia Noah <i>Nanoscale magnetic effects in the 2D magnet CrGeTe₃</i>
(13h10-13h25) 8.PS1.1.4 Ambarish Ghosh <i>Wigner crystallization on curved surfaces: collapsing multielectron bubbles in liquid He⁴ and He³</i>	(13h10-13h25) 8.PS1.2.4 Muntaser Naamneh <i>Pi/4 phase shift in the anisotropic magnetoresistance of infinite layer nickelates</i>	(13h10-13h25) 8.PS1.3.4 Suguru Hosoi <i>Presence/absence of point nodes revealed by thermal conductivity in UTe₂</i>			(13h10-13h25) 8.PS1.6.4 Jon Ortuzar <i>Revealing inter-band electron pairing in a superconductor with spin-orbit coupling</i>		(13h10-13h25) 8.PS1.8.4 Yu-Cheng Chang <i>Towards ultra strong-coupling quantum thermodynamics using a superconducting flux qubit</i>	(13h10-13h25) 8.PS1.9.4 Kamal Brahimi <i>Measurements into the Single Photon Regime in Ferroelectric Materials</i>

13h25-14h00 Lunch

14h00 Welcome words by the Rector of EHU, level 3

14h00-15h45 Poster session.

	Semiplenary Session 2	
	Auditorium 2 level 4. Chair Eli Zeldov	Luxua 1 level 3. Chair Nacho Pascual
15h45	(15h45-16h20) Long Ju, <i>Fractional Quantum Anomalous Hall Effect and Chiral Superconductivity in Graphene</i>	(15h45-16h20) Vidya Madhavan, <i>Vector Magnetic Field Response of Superconductivity and Charge Density Wave in UTe₂</i>
16h20	(16h20-16h55) Chun Ning (Jeanie) Lau, <i>Quantum Geometry and Screening of Flat Band Superconductivity in Twisted Bilayer Graphene</i>	(16h20-16h55) Beena Kalisky, <i>Imaging Quantum Materials</i>

16h55-17h25 Coffee break

Friday, 8 August, Afternoon Parallel Sessions

Room 1B level 5 8.PS2.1. Superfluid ³ He Chair: Jere Mäkinen	Room level 2 8.PS2.2. Quantum gases Chair: Lev Kendrick	Luxua 1 level 3 8.PS2.3 Iron based superconductors Chair: Freek Massee	Luxua 2 level 3 8.PS2.4. Thin films and interfaces-I Chair: Nandini Trivedi	Auditorium 1 level 4 8.PS2.5. Correlations and graphene Chair: Elena Bascones	Auditorium 2 level 4 8.PS2.6. Topology and Quantum Materials-II Chair: Adolfo Grushin	Room 1A level 5 8.PS2.7. Superconductivity, Spin orbit coupling and diode effects. Chair: Andrey Chubukov	Room 2 level 5 8.PS2.8. Thermal effects and heat transport Chair: Christoph Strunk	Room 3 level 5 8.PS2.9. Superconducting quantum circuits-II Chair: Ioan Pop	Room 4 level 5 8.PS2.10. LT Detectors-I Chair: Mika Sillanpää
(17h25-17h50). 8.PS2.1.1. Samuli Autti <i>QUEST-DMC: Looking for Low Mass Dark Matter using Superfluid ³He</i>	(17h25-17h50). 8.PS2.2.1. Yuki Kawaguchi <i>Dynamics of one- dimensional spinless fermions coupled with dynamical axion fields</i>	(17h25-17h50). 8.PS2.3.1. Milan Allan <i>What limits the critical temperature for superconductivity in quantum materials?</i>	(17h25-17h50). 8.PS2.4.1. Cui-Zu Chang <i>Interface-Induced Superconductivity in Quantum Anomalous Hall Insulators</i>	(17h25-17h50). 8.PS2.5.1. Cory Dean <i>Studies of electron viscosity in graphene - quantitative measurement from magnetoconductan ce in Corbino</i>	(17h25-17h50). 8.PS2.6.1. Junji Haruyama <i>Pseudo Tunnel Magnetoresistance Behaviours in Large- twist vdW Integration of Thin Magnetic Layers Fe₃GeTe₂</i>	(17h25-17h50). 8.PS2.7.1. Sadashige Matsuo <i>Superconducting diode effect in coherently coupled Josephson junctions</i>	(17h25-17h50). 8.PS2.8.1. Ilari Maasilta <i>Low-temperature heat transfer across vacuum via acoustic phonon tunneling</i>	(17h25-17h50). 8.PS2.9.1. Nicolas Roch <i>Josephson meta- materials: a new platform for quantum optics</i>	(17h25-17h50). 8.PS2.10.1. Steffen Grohmann <i>Gravitational-wave detectors cooled with superfluid helium – GRAVITHELIUM</i>
(17h50-18h05) 8.PS2.1.2 John Scott <i>Modelling the influence of structural anisotropy on superfluid helium- 3 in aerogel</i>	(17h50-18h05) 8.PS2.2.2. Andrea Tononi <i>Dimer problem on a spherical surface</i>	(17h50-18h05) 8.PS2.3.2. Yanzhao Liu <i>Pair density wave and modulation state in a monolayer high-T_c iron- based superconductor</i>	(17h50-18h05) 8.PS2.4.2. Ning Kang <i>Observation of a twofold anisotropy in ultrathin Mo₂C superconducting crystals</i>	(17h50-18h05) 8.PS2.5.2. Ryan L. Lee <i>Charge Sensing of Fractional Quantum Hall States in Graphene</i>	(17h50-18h05) 8.PS2.6.2. Yuki Nagai <i>Self-Learning Monte Carlo Method with Equivariant Transformer</i>	(17h50-18h05) 8.PS2.7.2. Mikio Eto <i>Enhanced Superconducting Diode Effect Utilizing Quantum Dot</i>	(17h50-18h05) 8.PS2.8.2. Tsuyoshi Yamamoto <i>Quantum heat transport across a Josephson junction</i>	(17h50-18h05) 8.PS2.9.2. Zhihui Peng <i>Experimental realization of on-chip few-photon control around exceptional points</i>	(17h50-18h05) 8.PS2.10.2. Dounia Helis <i>A Superconducting Qubit as an Underground Particle Detector</i>
(18h05-18h20) 8.PS2.1.3 Jan Knapp <i>Evidence for Many Body Localization of ³He atoms in two dimensions</i>	(18h05-18h20) 8.PS2.2.3. Jacques Tempere <i>Polarons as probes of superfluid and supersolid phases in quantum gases</i>	(18h05-18h20) 8.PS2.3.3. Maw-Kuen Wu <i>Correlation between Fe- vacancy and superconductivity in K₂Fe_{4-x}Se₅ crystals</i>	(18h05-18h20) 8.PS2.4.3. Jiawei Zhang <i>Stacking-selective self-intercalation in Nb_{1+x}Se₂</i>	(18h05-18h20) 8.PS2.5.3. Kazuki Nakazawa <i>Theory of nonlinear Shubnikov-de Haas effect.</i>	(18h05-18h30) 8.PS2.6.3. Celia Rogero <i>Epitaxial vdW Heterostructures with Magnetic Transition Metal Dihalides as a Universal Platform for Investigation of the Quantum Effects</i>	(18h05-18h30) 8.PS2.7.3. Ilya Tokatly <i>Effective field theory for coupled charge and spin transport in mesoscopic superconductors</i>	(18h05-18h20) 8.PS2.8.3. Yasuhiro Tokura <i>Quantum Heat Transport across Capacitively Coupled Quantum Dots</i>	(18h05-18h20) 8.PS2.9.3. Adrian Parra- Rodríguez <i>Exact and dispersive models for superconducting networks</i>	(18h05-18h20) 8.PS2.10.3. Antonio D' Addabbo <i>The monolithic arrays of the BULLKID-DM Kinetic Inductance Detectors searching for light Dark Matter</i>
(18h20-18h45) 8.PS2.1.4 Anton Vorontsov <i>Modeling superfluid He-3 in anisotropic aerogel</i>	(18h20-18h45) 8.PS2.2.4. Fernando Sols <i>Superfluidity from correlations in driven boson systems</i>	(18h20-18h45) 8.PS2.3.4. Hai-Hu Wen <i>Small Fermi energy and unique vortex bound states in iron-based superconductors</i>	(18h20-18h45) 8.PS2.4.4. Thilo Bauch <i>Quasiparticle Spectroscopy using a YBCO Transmon</i>	(18h20-18h45) 8.PS2.5.5. Vadim Geshkenbein <i>Abrikosov vortices switching Josephson current in magic angle graphene</i>	(18h30-18h55) 8.PS2.6.4. Chuan Li <i>Multi-channel second-order topological states in Bi_{0.97}Sb_{0.03}</i>	(18h30-18h55) 8.PS2.7.4. Denis Kochan <i>Magnetoelectric phenomena of non- centrosymmetric superconductors – supercurrent diode effect and anisotropic vortex squeezing</i>	(18h20-18h45) 8.PS2.8.4. Eduardo Lee <i>Joule spectroscopy and thermal effects in hybrid superconductor- semiconductor nanodevices</i>	(18h20-18h45) 8.PS2.9.4. Malika Randeria <i>Decoherence in fluxonium: a case study in superconducting qubit design</i>	(18h20-18h45) 8.PS2.10.4. Shihong Fu <i>Recent results from CUORE and path towards CUPID</i>
(18h45-19h00) 8.PS2.1.5 Asier Lopez-Eiguren <i>Numerical simulations of superfluid ³He</i>	(18h45-19h10) 8.PS2.2.5. Sarah Hirthe <i>Probing supersolidity through excitations in a spin-orbit- coupled Bose- Einstein condensate</i>	(18h45-19h10) 8.PS2.3.5. Subhasish Mandal <i>The Interplay of Electron Correlation, El.-Phonon Coupling, and non trivial topology for Enhancing Superconductivity in FeSe/SrTiO3</i>	(18h45-19h10) 8.PS2.4.5. Angelo Di Bernardo <i>Gate control of supercurrents: from earlier evidence to technological applications</i>		(18h55-19h20) 8.PS2.6.5. Lin Jiao <i>Realizing a topological diode effect on SmB6</i>	(18h45-19h10) 8.PS2.8.5. Gleb Finkelstein <i>Electrical and thermal properties of the superconductor – quantum Hall interfaces</i>	(18h45-19h10) 8.PS2.9.5. Youpeng Zhong <i>Low-loss interconnects for modular superconducting quantum processors and beyond</i>	(18h45-19h10) 8.PS2.10.5. Simone Quitadamo <i>First detection of marine microseismic activity with the CUORE ton-scale milliKelvin macro- calorimeters array</i>	

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
	Plenary session 2. Chair Naoto Nagaosa
09h00	(09h00-09h45) Lieven Vandersypen, <i>Quantum computation and simulation with electrons</i>
09h45	(09h45-10h30) Andrea Young, <i>Superconductivity and magnetism in rhombohedral graphene multilayers</i>

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, <i>QUEST-DMC: The first-order phase transition in superfluid helium-3</i>	(11h00-11h35) J. C. Seamus Davis, <i>Imaging Superconductive Topological Surface Band and Spin Triplet Order Parameter of UTe₂</i>
11h35	(11h35-12h10) Wei Guo, <i>Recent progress in probing vortex dynamics and developing quantum information platforms</i>	(11h35-12h10) Peter Hirschfeld, <i>Overdoped cuprates: disorder, inhomogeneity, Homes scaling and all that</i>

12h10-12h15 Room change to parallel sessions

Saturday, 9 August, Morning Parallel Sessions

Room 1B level 5 9.PS3.1. Superfluid Helium-II Chair: Petri Heikkinen	Luxua 1 level 3 9.PS3.2. Superc. non-equilibrium and fluctuations Chair: Andreas Kreisel	Auditorium level 4 9.PS3.3. Cuprates I Chair: Mohit Randeria	Luxua 2 level 3 9.PS3.4. Unconventional superconductivity Chair: Xianhui Chen	Room 1A level 5 9.PS3.5. Correlated materials-I Chair: Alix McCollam	Room 2 level 5 9.PS3.6. Quantum Hall Chair: Rubén 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: Fernando González Zalba	Room level 2 9.PS3.9. Superconducting devices Chair: Eduardo Lee
(12h15-12h40) 9.PS3.1.1. Jack Harris <i>New results on magnetically levitated drops of superfluid helium</i>	(12h15-12h40) 9.PS3.2.1. Peter Armitage <i>Energy relaxation and dynamics in strongly correlated materials</i>	(12h15-12h40) 9.PS3.3.1. Yingying Peng <i>Electron-Phonon Coupling and Superconducting Gap Symmetry in High-Tc Cuprates</i>	(12h15-12h40) 9.PS3.4.1. Makoto Hashimoto <i>Unconventional Superconductivity in Cuprates – Strides Made and Challenges Remain</i>	(12h15-12h40) 9.PS3.5.1. Valentin Taufour <i>Giant field induced unconventional anomalous Hall conductivity in the non-centrosymmetric Weyl metal CeCoGe₃</i>	(12h15-12h40) 9.PS3.6.1. Frédéric Pierre <i>Observation of the scaling dimension of fractional quantum Hall anyons</i>	(12h15-12h40) 9.PS3.7.1. Tingxin Li <i>Fractional quantum anomalous Hall effect and competing quantum phases in twisted MoTe₂</i>	(12h15-12h40) 9.PS3.8.1. Erika Kawakami <i>Floating Electrons Coupled to Resonators</i>	(12h15-12h40) 9.PS3.9.1. Nicola Paradiso <i>2D arrays of ϕ0-Josephson junctions</i>
(12h40-13h05) 9.PS3.1.2. Dmitry Zmeev <i>Superflow on the scale of a coherence length</i>	(12h40-13h05) 9.PS3.2.2. Philip Phillips <i>Solving the Mott Problem</i>	(12h40-13h05) 9.PS3.3.2. Jeff Tallon <i>Questioning the cuprate paradigm - absence of superfluid density loss in overdoped cuprates</i>	(12h40-12h55) 9.PS3.4.2. Yuji Aoki <i>Search for Symmetry-Enforced Dirac Points via Magnetoresistance Quantum Oscillations in Non-Symmorphic Type-I Superconductor beta-IrSn₄</i>	(12h40-12h55) 9.PS3.5.2. Eran Maniv <i>Dark Metastable Conduction Channels near a Metal-Insulator Transition</i>	(12h40-12h55) 9.PS3.6.2. Olivier Maillet <i>Charge equilibration in counter-propagating quantum Hall channels coupled via Landauer reservoirs</i>	(12h40-12h55) 9.PS3.7.2. Alessandro Braggio <i>Thermoelectric detection in hybrid and quantum nanodevices</i>	(12h40-12h55) 9.PS3.8.2. Natalia Morais <i>Rydberg Tomography of Electrons on Helium in a Linear Microtrap</i>	(12h40-12h55) 9.PS3.9.2. Xiaoying Xu <i>Signature of chiral superconductivity evidenced in mesoscopic superconductors</i>
(13h05-13h30) 9.PS3.1.3. Yutaka Sasaki <i>Macroscopic Orbital Supercurrent along the Edge of Chiral Domain in Chiral Superfluid ³He</i>	(13h05-13h20) 9.PS3.2.3. Jianlin Luo <i>Unconventional coherence peak in cuprate superconductors</i>	(13h05-13h20) 9.PS3.3.3. Chung-Hou. Chung <i>A mechanism for quantum-critical Planckian metal phase in high-temperature cuprate superconductors</i>	(12h55-13h10) 9.PS3.7.1. Tejas Singar <i>Lifshitz transition observed through vortex core spectroscopy in Bi-2212 superconductor</i>	(12h55-13h10) 9.PS3.5.3. Lin Hao <i>Atomically controlled insulator-to-metal transition in strongly correlated iridate/manganite heterostructures</i>	(12h55-13h10) 9.PS3.6.3. Kyungtae Kim <i>Fractional Quantum Hall Levitons</i>	(12h55-13h10) 9.PS3.7.3. Takeo Kato <i>Microscopic Theory of Spin Current Generation by Chiral Phonons</i>	(12h55-13h10) 9.PS3.8.3. Maxwell Freeman <i>Progress Towards a Low Temperature Superfluid 4He Josephson Junction using 2D Nanoporous Materials</i>	(12h55-13h10) 9.PS3.9.3. Amber Mozes <i>Microwave assisted scanning tunneling microscopy to probe local complex impedance of unconventional superconductors</i>
			(13h10-13h25) 9.PS3.4.4. Lev V Levitin <i>Identification of topological superconductivity in YbRh₂Si₂</i>	(13h10-13h25) 9.PS3.5.4. Mengze Zhu <i>Excitations in a triangular-lattice spin supersolid</i>			(13h10-13h25) 9.PS3.8.4. Camryn Undershute <i>Decoherence of Surface Phonons in a Quantum Acoustic System</i>	(13h10-13h25) 9.PS3.9.4. David Caldevilla-Asenjo <i>Experimental observation of Multiple Andreev Reflection at the interface with a spin-split superconductor</i>

13h25-14h00 Lunch

14h00-15h45 Poster session

	Semiplenary Session 4	
	Auditorium 2 level 4. Chair: Lieven Vandersypen	Luxua 1 level 3. Chair Peter Hirschfeld
15h45	(15h45-16h20) Eli Zeldov, <i>Visualizing isospin order and exchange interactions in rhombohedral graphene</i>	(15h45-16h20) Erez Berg, <i>Exotic Superconductivity in Graphene Multilayers</i>
16h20	(16h20-16h55) Daniel Loss, <i>Spin Qubits in Semiconductors for Scalable Quantum Computers</i>	(16h20-16h55) Roser Valenti, <i>The revival of Fe-based superconductors: cascades of screening processes and their implications</i>

16h55-17h25 Coffee

Saturday, 9 August, Afternoon Parallel Sessions

Room level 2 9.PS4.1. Theory and other condensates Chair: Jack Harris	Room 1B level 5 9.PS4.2. Quantum turbulence-I Chair: Xabier Rojas	Auditorium 1 level 4 9.PS4.3. Graphene and twisted systems-I Chair: Erez Berg	Auditorium 2 level 4 9.PS4.4. UTe ₂ -II Chair: Dai Aoki	Luxua 1 level 3 9.PS4.5. Spin chains, chiral magnets and superconductivity Chair: Celia Rogero	Luxua 2 level 3 9.PS4.6. Spin Ice and magnetic textures Chair: Yong Baek Kim	Room 1A level 5 9.PS4.7. Graphene and bound states at surfaces Chair: Andrea Young	Room 2 level 5 9.PS4.8. Josephson Physics Chair: Venkat Chandrasekhar	Room 3 level 5 9.PS4.9. Superconducting quantum circuits-III Chair: Erika Kawakami	Room 4 level 5 9.PS4.10. LT instrumentation and applications-II Chair: Nicola Paradiso
(17h25-17h50). 9.PS4.1.1. Jordi Boronat <i>Self-bound clusters of ultracold polar molecules</i>	(17h25-17h50). 9.PS4.2.1. Luca Galantucci <i>Quantum vortices leave a macroscopic signature in the thermal background</i>	(17h25-17h50). 9.PS4.3.1. Elena Bascones <i>Heavy fermions and cascades in twisted bilayer graphene: new results</i>	(17h25-17h50). 9.PS4.4.1. Johnpierre Paglione <i>Key issues in understanding the superconductivity of UTe₂</i>	(17h25-17h50). 9.PS4.5.1. Nicolas Lorente <i>Topological Character of Cr Spin Chains on Bi₂Pd</i>	(17h25-17h50). 9.PS4.6.1. Stephane Raymond <i>Uncommon magnetic order in the hyperkagome system Yb₃Ga₅O₁₂</i>	(17h25-17h50). 9.PS4.7.1. Chunli Huang <i>Momentum-Space AC Josephson Effect and Intervalley Coherence in Multilayer Graphene</i>	(17h25-17h50). 9.PS4.8.1. Manuel Houzet <i>Josephson quantum mechanics at odd parity</i>	(17h25-17h50). 9.PS4.9.1. Angela Kou <i>Using disordered superconductors to build qubits</i>	(17h25-17h50). 9.PS4.10.1. Duy Ha Nguyen <i>Advancing sensitive measurement techniques for the study of quantum materials at ultralow temperatures</i>
(17h50-18h05) 9.PS4.1.2. Alberto Villois <i>Breakdown of Superfluidity in Two-Dimensional Dipolar Bose- Einstein Condensates</i>	(17h50-18h15) 9.PS4.2.2. Andrei Golov <i>Quantum Turbulence Sampled by 1-6 µm Particles Down to the T = 0 Limit</i>	(17h50-18h05) 9.PS4.3.2. Ding Zhang <i>DC and AC Josephson effects in twisted cuprate bicrystals</i>	(17h50-18h05) 9.PS4.4.2. Andreas Kreisel <i>Detecting the nodal superconducting gap structure and topological surface states of UTe₂ with QPI</i>	(17h50-18h05) 9.PS4.5.2. Yusuke Masaki <i>Phase Transitions in Quantum Monoaxial Chiral Magnets under Tilted Magnetic Fields</i>	(17h50-18h05) 9.PS4.6.2. Félix Morineau <i>Satisfaction and violation of the fluctuation- dissipation relation in spin ice</i>	(17h50-18h05) 9.PS4.7.2. Mitali Banerjee <i>Graphene antidot in quantum Hall states</i>	(17h50-18h05) 9.PS4.8.2. Francisco Jesús Matute <i>Quantum circuits with multiterminal Josephson- Andreev junctions</i>	(17h50-18h05) 9.PS4.9.2. Xi Chen <i>Optimal Control and Shortcuts to Adiabaticity for Fast Qubit Readout in Circuit Quantum Electrodynamics</i>	(17h50-18h05) 9.PS4.10.2 Shuheng Pan <i>Development of an Ultra-Low Temperature High Magnetic Field Dual-Axile Rotational Scanning Tunneling Microscope</i>
(18h05-18h20) 9.PS4.1.3. Lev Melnikovski <i>Quantized Vortices in Multi- Component Superfluids</i>	(18h15-18h30) 9.PS4.2.3 Ken Obara <i>Superfluid Suction Vortex Generated by Fountain Effect</i>	(18h05-18h30) 9.PS4.3.3. Nils Krane <i>Engineering and Exploring Spin Excitations and Correlations in Open-Shell Nanographene Systems</i>	(18h05-18h30) 9.PS4.4.3. Brad Ramshaw <i>Searching for topological superconductivity in UTe₂ using ultrasound</i>	(18h05-18h20) 9.PS4.5.3. Hao Zheng <i>Spectroscopy on superconductor carrying a supercurrent</i>		(18h05-18h30) 9.PS4.7.2. Katharina J. Franke <i>Wave-function engineering of Yu- Shiba-Rusinov states from magnetic atoms and molecules on superconductors</i>	(18h05-18h20) 9.PS4.8.3. Edouard Sonin <i>Theory of Planar Ballistic SNS Junctions at T = 0</i>	(18h05-18h30) 9.PS4.9.3. Pankaj Sethi <i>Scalable Fabrication of High-Performance Superconducting Qubits Using Native-Oxide Passivated Trilayer Junctions</i>	(18h05-18h20) 9.PS4.10.3. Yutaka Fujii <i>Development of Simultaneous Detection Method of Millimeter-Wave Electron Spin Resonance and Electrically- Detected Magnetic Resonance Signals of Phosphorous- doped Si</i>

Conference dinner at 20h00

Sunday, 10 August

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

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) Nacho Pascual, <i>A nanoscale Cooper pair tunneling diode</i>	(11h30-12h05) Natalia Ares, <i>Machine learning-based control and characterisation of quantum devices</i>
12h05	(12h05-12h40) Stuart Parkin, <i>Magnetic Tunnel Junctions and Josephson junctions using 2D van der Waals layers</i>	(12h05-12h40) Meng Wang, <i>High-temperature superconductivity in the Ruddlesden-Popper phase of nickelates</i>
12h40	(12h40-13h15) Seigo Tarucha, <i>High-Fidelity Qubit Gates and Phase Noise in Silicon Multi-qubit Devices</i>	(12h40-13h15) Elena Hassinger, <i>Mysteries of the two-phase superconductor CeRh₂As₂</i>
13h15	(13h15-13h50) Jukka P. Pekola, <i>Superconducting circuits as a platform for quantum thermodynamics experiments</i>	(13h15-13h50) Maia G. Vergniory, <i>The topological revival of Fe-based superconductors</i>

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, <i>Quantum Geometry and Superconductivity</i>
09h45	(09h45-10h30) Dai Aoki, <i>Spin-Triplet Superconductivity under Extreme Conditions in UTe_2</i>

10h30-11h00 Coffee break and exhibition

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

12h10-12h15 Room change to parallel sessions

Monday, 11 August, Morning Parallel Sessions

Room 1A level 5 11.PS5.1 He nanomechanics Chair: William P. Halperin	Auditorium level 4 11.PS5.2 Topological superconductivity-I Chair: Gabriela Pasquini	Luxua 1 level 3 11.PS5.3 Superconductivity and magnetism (COST superqumap.eu) Chair: Wolfgang Lang	Luxua 2 level 3 11.PS5.4 Magnons and superconductivity Chair: Rosa López	Room 1B level 5 11.PS5.5 Kagome magnets Chair: Jakob Nagl	Room 2 level 5 11.PS5.6 2D and quasi-2D Materials Chair: Paula Giraldo	Room 3 level 5 11.PS5.7 Correlated and low dimensional systems Chair: Pablo Burset	Room level 2 11.PS5.8 Novel and hybrid platforms-II Chair: Gloria Platero	Room 4 level 5 11.PS5.9 Thermometry and refrigeration techniques- I Chair: Hiroshi Fukuyama
(12h15-12h40). 11.PS5.1.1. Viktor Tsepelin <i>Interaction of NEMS with a Quantum Vortex in Superfluid-4</i>	(12h15-12h40). 11.PS5.2.1. Yukio Tanaka <i>Theory of full counting statistics in unconventional superconductor junctions</i>	(12h15-12h40). 11.PS5.3.1. Peter Samuely <i>Ising superconductivity in bulk 4H_a-NbSe₂</i>	(12h15-12h40). 11.PS5.4.1. María José Martínez <i>From Cavity - QED to Van der Waals – QED: magnons instead of photons</i>	(12h15-12h40). 11.PS5.5.1. Shota Suetsugu <i>Gapless spin excitations and gapped magnetization plateau phases in a spin-1/2 perfect kagome antiferromagnet</i>	(12h15-12h40). 11.PS5.6.1. Hélène Bouchiat <i>Probing orbital currents in 2D materials</i>	(12h15-12h40). 11.PS5.7.1. Armando Aligia <i>Topological quantum phase transition to a “non-Landau” Fermi liquid in a two-channel spin-1 anisotropic Kondo model and its experimental relevance</i>	(12h15-12h40). 11.PS5.8.1 Matias Urdampilleta <i>A foundry-fabricated spin qubit unit-cell with in-situ dispersive readout</i>	(12h15-12h40). 11.PS5.9.1. Christoforus Dimas Satrya <i>Thermal Spectrometer for Superconducting Circuits</i>
(12h40-12h55) 11.PS5.1.2. Riku Rantanen <i>Engineering topology in a superfluid through nanoscale confinement</i>	(12h40-12h55) 11.PS5.2.2. Hidemitsu Takahashi <i>Pressure-Induced Structural Anomaly in the Dirac Line-Nodal Material CaSb₂</i>	(12h40-12h55) 11.PS5.3.2. Jeroen Custers <i>Evidence for Coexistence of Magnetism and Superconductivity in Ce₃PtIn₁₁</i>	(12h40-12h55) 11.PS5.4.2. Sara Catalano <i>EuS Interfaces for Low Temperature Spintronics</i>	(12h40-12h55) 11.PS5.5.2. Zhu-An Xu <i>Giant Anomalous Hall Effect in Kagome Nodal Surface Semimetal Fe₃Ge</i>	(12h40-12h55) 11.PS5.6.2. Chengjie Zhou <i>Mapping the Mott and Generalized Wigner Crystal States in Twisted Bilayer MoS₂ by Quantum Well Resonant Tunneling Spectroscopy</i>	(12h40-12h55) 11.PS5.7.2. Tomáš Novotný <i>Double quantum dot Andreev molecules: numerical phase diagrams, critical evaluation of effective models, and identification of microscopic mechanisms</i>	(12h40-12h55) 11.PS5.8.2 Federico Fedele <i>Spin mechanical coupling and self-oscillations in a carbon nanotube electromechanical resonator</i>	(12h40-12h55) 11.PS5.9.2. Joel Hätnen <i>Nb-based tunnel junction refrigerators</i>
(12h55-13h20) 11.PS5.1.3. Oleg Kirichek <i>⁴He and ³He – ⁴He mixture films studied by neutron reflectometry</i>	(12h55-13h10) 11.PS5.2.3. Nicholas Poniatowski <i>Detecting induced unconventional superconductivity with cQED</i>	(12h55-13h10) 11.PS5.3.3. Pavol Szabo <i>Disorder- and magnetic field-tuned fermionic superconductor-insulator transition in MoN thin films. Transport and STM studies.</i>	(12h55-13h10) 11.PS5.4.3. Lin Hao <i>Atomically controlled insulator-to-metal transition in strongly correlated iridate/manganite heterostructures</i>	(12h55-13h10) 11.PS5.5.3. Moyu Kato <i>Magnetism of novel kapellasite-type kagome antiferromagnet InCu₃(OH)6Cl₃</i>	(12h55-13h10) 11.PS5.6.3. Eudomar Rafael Henriquez <i>Biaxial Compressive Strain Tuning of Quantum Properties in 2D Materials</i>	(12h55-13h10) 11.PS5.7.3. Jose Torres <i>K-P model for moiré exciton trapping and polarization</i>	(12h55-13h10) 11.PS5.8.3 Claudio Bonizzoni <i>Perfect Absorption of Single-Photons for Quantum Technologies</i>	(12h55-13h10) 11.PS5.9.3. Dmitrii Lvov <i>Thermometry Based on a Superconducting Qubit</i>
	(13h10-13h25) 11.PS5.2.4. Ryo Okugawa <i>Gapless topological superconducting phases in two-dimensional quasicrystals</i>	(13h10-13h25) 11.PS5.3.4. Vladimir M. Fomin <i>Superconductor 3D Nanoarchitectures: A Playground for Novel Quantum Phenomena</i>	(13h10-13h25) 11.PS5.4.4. Ali Badreldin <i>A 200-mm Superconducting Platform for the Microwave Characterization of Magnetic Materials at Low Temperature</i>		(13h10-13h25) 11.PS5.6.4. Reyes Calvo <i>Strain Engineering of Magnetoresistance and Magnetic Anisotropy in CrSBr</i>	(13h10-13h25) 11.PS5.7.4. Karol Izidor Wysokinski <i>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.</i>	(13h10-13h25) 11.PS5.8.4 Carolina Del Río <i>Remote polariton-polariton interactions mediated by superconducting circuits for quantum applications</i>	(13h10-13h25) 11.PS5.9.4. Libin Wang <i>Normal metal Coulomb Blockade Thermometer below 10 mK</i>

13h25-14h00 Lunch

14h00-15h45 Poster session

	Semiplenary Session 7	
	Auditorium 2 level 4. Chair J.C. Séamus Davis	Luxua 1 level 3. Chair Jukka P. Pekola
15h45	(15h45-16h20) Eun-Ah Kim, <i>Data-centric Approach to Quantum Materials using AI</i>	(15h45-16h20) Sebastian Will, <i>Molecular Quantum Liquids</i>
16h20	(16h20-16h55) Paul C. Canfield, <i>Collapsed tetragonal phase transitions as canaries</i>	(16h20-16h55) Dafei Jin, <i>Noise-resilient solid host for electron qubits above 100 mK</i>

16h55-17h25 Coffee

Monday, 11 August, Afternoon Parallel Sessions

Room 1A level 5 11.PS6.1 Superfluid Helium-III Chair: Viktor Tsepelin	Auditorium1 level 4 11.PS6.2 Nickelate, Kagome and other topical superconductors Chair: Pavol Szabo	Auditorium2 level 4 11.PS6.3 Collective modes and Quantum criticality Chair: Huiqiu Yuan	Luxua1 level 3 11.PS6.4 Vortex lattices and nanostructures (COST superqumap.eu) Chair: Peter Samuely	Luxua2 level 3 11.PS6.5 Correlated materials-II Chair: Mariela Menghini	Room 1B level 5 11.PS6.6 Magnetism and Exotic Spin States Chair: Stephane Raymond	Room 2 level 5 11.PS6.7 Quantum Transport-II Chair: Armando Aligia	Room 3 level 5 11.PS6.8 Superconducting devices/van der Waals materials Chair: Hélène Bouchiat	Room level 2 11.PS6.9 QC with semiconductor circuits Chair: Dafei Jin	Room 4 level 5 11.PS6.10 Thermometry and refrigeration techniques-II Chair: Agustín Camón
(17h25-17h50). 11.PS6.1.1. William P. Halperin <i>Magnetic susceptibility enhancement of superfluid ³He-B in anisotropic confinement</i>	(17h25-17h50). 11.PS6.2.1. Xianhui Chen <i>Superconductivity and density wave transition in Ruddlesden–Popper phase nickelates</i>	(17h25-17h50). 11.PS6.3.1. Mohit Randeria <i>Andreev versus Tunneling Spectroscopy in Unconventional Flat Band Superconductors</i>	(17h25-17h50). 11.PS6.4.1. Gabriela Pasquini <i>Exploring the interplay between nematicity and superconductivity</i>	(17h25-17h50). 11.PS6.5.1. Hae-Young Kee <i>Microscopic Roadmap to a Kitaev-Yao-Lee Spin-Orbital Liquid</i>	(17h25-17h50). 11.PS6.6.1. Jakob Nagl <i>Ground-State Selection and Braided Ising Spin-Tubes in a new Family of Breathing Kagome Magnets</i>	(17h25-17h50). 11.PS6.7.1. Rose López <i>Quantum Kinetic Charge Pulses in Mesoscopic Conductors at Strong Coupling</i>	(17h25-17h50). 11.PS6.8.1. Pablo Burset <i>Single-Electron Charge Pulses in Superconducting Devices</i>	(17h25-17h50). 11.PS6.9.1. Guido Burkard <i>The singlet-triplet and exchange-only flopping-mode spin qubits</i>	(17h25-17h50). 11.PS6.10.1. Hiroshi Fukuyama <i>The Continuous Sub-millikelvin Refrigerator</i>
(17h50-18h15) 11.PS6.1.2. Priya Sharma <i>Towards a micromechanical qubit based on quantized oscillations in superfluid helium</i>	(17h50-18h05) 11.PS6.2.2. Qun Niu <i>Nematicity and orbital current order probed by transverse resistivity in Kagome metal thin flakes</i>	(17h50-18h05) 11.PS6.3.2. Hiroshi Watanabe <i>Theory of BCS-BEC Crossover in Strongly Correlated Electron Systems</i>	(17h50-18h05) 11.PS6.4.2. Anna Palau <i>Field-Induced Phase Transitions in Cuprate Superconductors for Cryogenic in-Memory Computing</i>	(17h50-18h05) 11.PS6.5.2. Simli Mishra <i>Simultaneous optical and thermodynamic investigation of Ca₃Ru₂O₇</i>	(17h50-18h05) 11.PS6.6.2. Kazushi Aoyama <i>Asymmetric spin-wave dispersion in a triple-Q chiral state of a breathing-kagome antiferromagnet</i>	(17h50-18h05) 11.PS6.7.2. Ignacio Casal <i>Ultrastrongly Coupled Gatemon Qubit</i>	(17h50-18h05) 11.PS6.8.2. Mykhailo Moskalets <i>An e-h superposition created on demand</i>	(17h50-18h05) 11.PS6.9.2. Irene Fernández de Fuentes <i>Running a six-qubit algorithm on a silicon spin qubit array</i>	(17h50-18h05) 11.PS6.10.2. Yasuyuki Shimura <i>Application of Adiabatic Demagnetization Refrigeration by Enlarged YbCu₂Ni Alloy under Sub-Kelvin Temperature Region</i>
(18h15-18h40) 11.PS6.1.3. Xabier Rojas <i>Novel platforms for superfluid optomechanics</i>	(18h05-18h20) 11.PS6.2.3 Jose D Bermúdez <i>Scanning Tunneling Spectroscopy of FeSe Under in-plane Magnetic Fields</i>	(18h05-18h20) 11.PS6.3.3. Stefano Trivini <i>Role of Superconductor/grap hene interface conductance in proximity effect</i>	(18h05-18h20) 11.PS6.4.3. Wolfgang Lang <i>Tailoring Vortex Behavior in High-Tc Superconductors via Periodic Defects Created by Focused Helium Ion Beams</i>	(18h05-18h20) 11.PS6.5.3. Takeshi Mito <i>Origin of Low-Temperature Magnetic Fluctuations in Kondo Insulator SmB₆ studied by 10B- and 11B-NMR measurements</i>	(18h05-18h20) 11.PS6.6.3. Sergei Zvyagin <i>High-field magnetic properties of the alternating ferro-antiferromagnetic spin-1/2 chain compound Cu₂(OH)3Br</i>	(18h05-18h20) 11.PS6.7.3. Luca Magazzu <i>Thermal rectification in a qubit-oscillator system</i>	(18h05-18h20) 11.PS6.8.3. Maxim Ilyn <i>Epitaxial Van der Waals Heterostructures Magnetic Transition Metal Dihalides / Superconductor 2H-NbSe₂</i>	(18h05-18h20) 11.PS6.9.3. Kyle Castoria <i>Single Surface-Electron Sensing and CMOS Control Above 1 Kelvin</i>	(18h05-18h20) 11.PS6.10.3. Jasper Kölling <i>Accelerating cryogenic testing and characterization of quantum materials and devices with novel ADR cryostats</i>
(18h40-19h05) 11.PS6.1.4 Piotr Stasiak <i>Experimental and theoretical evidence of universality in vortex reconnections</i>	(18h20-18h35) 11.PS6.2.4 Masahiko Isobe <i>Crystal Growth of Nickelates for Potential High-Tc Superconductors</i>	(18h20-18h45) 11.PS6.3.4 Dirk Manske <i>Higgs Spectroscopy of Superconductors</i>	(18h20-18h45) 11.PS6.4.4 Milorad Milosevic <i>Advances in multiphysics simulations of superconducting electronics</i>	(18h20-18h45) 11.PS6.5.4 Yanina Fasano <i>How do atomic defects alter the electronic properties of Fe-based superconductors?</i>	(18h20-18h45) 11.PS6.6.4 Yong Baek Kim <i>Fractionalized excitations and emergent photons in dipolar-octupolar quantum spin ice</i>	(18h20-18h45) 11.PS6.7.4 Rubén Seoane <i>Towards Ideal Supercurrent Rectification in Josephson Junctions</i>	(18h20-18h45) 11.PS6.8.4 Guorui Chen <i>Correlated and topological states in ABC-stacking multilayer graphene</i>	(18h20-18h45) 11.PS6.9.4 Fernando Gonzalez Zalba <i>A quantum processor based on silicon spin qubits</i>	(18h20-18h45) 11.PS6.10.4 Marvin Klinger <i>Frustrated magnets for milli-Kelvin refrigeration</i>
		(18h45-19h10) 11.PS6.3.5. Freek Massee <i>Hund's assisted multi-channel quantum phase transition in Fe(Se,Te)</i>	(18h45-19h10) 11.PS6.4.5. Dragana Popovic <i>Persistence of Vortexlike Phase Fluctuations in Underdoped to Heavily Overdoped Bi-2201 Cuprates</i>	(18h45-19h10) 11.PS6.5.5. Alix McCollam <i>Fermi surface reconstruction and non-Fermi liquid behavior near the ferromagnetic quantum phase transition in Fe(Ga_{1-x}Gex)₃</i>	(18h45-19h00) 11.PS6.6.5. Syed Danish Nabi <i>Magnetic phase diagram and model Hamiltonian of Cs₂RuO₄</i>	(18h45-19h10) 11.PS6.7.4 Kuan-Hsun Chiang <i>Dual-qubit heat valve: an experimental study on collective quantum heat transport</i>	(18h45-19h10) 11.PS6.8.5. Wei Li <i>Interplay between Stripe-like Charge orders, Electronic Correlation and Majorana Bound States in 2M-WS₂</i>	(18h45-19h00) 11.PS6.9.5. Elizaveta Morozova <i>Onset of a quantum phase transition in a germanium quantum dot ladder</i>	(18h45-19h10) 11.PS6.10.5. Daria Szewczyk <i>Heat Capacity Investigations of Benzene Derivatives: Exploring the Mechanism Behind Glassy Anomalies in Quasiplanar Molecular Crystals</i>

Tuesday, 12 August

	Auditorium level 4
	Plenary session 5. Chair Jean Pascal Brison
09h00	(09h00-09h45) Joseph Checkelsky, <i>Natural Superlattice Materials and Modulated Superconductivity</i>
09h45	(09h45-10h30) Jörg Schmalian, <i>Superconductivity and Loop Currents: from Cuprates to Kagome Metals</i>

10h30-11h00 Coffee break and exhibition

	Semiplenary Session 8	
	Auditorium level 4. Chair Makoto Tsubota	Luxua 1 level 3. Chair Benjamin Sacépé
11h00	(11h00-11h35) JP Davis, <i>Superfluid ^3He Electromechanics</i>	(11h00-11h35) Ramón Aguado, <i>Novel qubits based on hybrid semiconductor-superconductor Josephson junctions</i>
11h35	(11h35-12h10) Yong-Hamb Kim, <i>Magnetic microcalorimeters for large-scale astroparticle physics applications</i>	(11h35-12h10) Christoph Strunk, <i>Berezinski-Kosterlitz-Thouless transition in strongly disordered NbN films close to the localization threshold</i>

12h10-12h15 Room change to parallel sessions

Tuesday, 12 August, Morning Parallel Sessions

Room 1A level 5 12.PS7.1. Quantum turbulence II	Auditorium level 4 12.PS7.2. Kagome SC Chair: Maria Iavarone	Luxua1 level 3 12.PS7.3. Thin film and interfaces-II (COST superqumap.eu) Chair: Jeroen Custers	Luxua2 level 3 12.PS7.4. Correlated materials- III Chair: Yanina Fasano	Room 1B level 5 12.PS7.5. Strongly correlated magnets-II Chair: Martin Klanjsek	Room 2 level 5 12.PS7.6. Physical Effects in Nanoscale and Quantum Materials Chair: Gabor Csathy	Room 3 level 5 12.PS7.7. Josephson and hybrid superconducting systems Chair: Manuel Houzet	Room level 2 12.PS7.8. Novel and hybrid platforms-III Chair: Matias Urdampilleta	Room 4 level 5 12.PS7.9. Thermometry and refrigeration techniques-III Chair: Miguel Ángel Ramos
(12h15-12h40). 12.PS7.1.1. Ryuji Nomura <i>Quantum Dripping of Superfluid Pendant Droplets</i>	(12h15-12h40). 12.PS7.2.1 Rina Tazai Multi-stage Phase Transitions and Non- Reciprocal Transport in Kagome Superconductors AV ₃ Sb ₅	(12h15-12h40). 12.PS7.3.1 Floriana Lombardi <i>Ground State Engineering in Ultrathin YBCO via Nanostructured Surfaces: Enhanced Superconductivity, Nematicity, and Unidirectional Charge Order</i>	(12h15-12h40). 12.PS7.4.1 Mariela Menghini <i>Mott resistive switching in an antiferromagnetic insulator initiated by topological defects</i>	(12h15-12h40). 12.PS7.5.1 Grace Causer <i>One-dimensional magnetic soliton layers in a cubic chiral magnet</i>	(12h15-12h40). 12.PS7.6.1 Makoto Naka <i>Spin-splitting and cross-correlation in altermagnets</i>	(12h15-12h40). 12.PS7.7.1 Venkat Chandrasekhar <i>Searching for signatures of non-trivial topology in diffusive, multiterminal Josephson junctions</i>	(12h15-12h40). 11.PS7.8.1. Gloria Platero <i>Topological edge states for quantum information transfer</i>	(12h15-12h40). 12.PS7.9.1 Jian Huang <i>Development of a new magnetic refrigeration method for achieving low temperatures below one-Kelvin without using the helium-3</i>
(12h40-12h55) 12.PS7.1.2 Hiromitsu Takeuchi <i>Eccentric fractional skyrmions from quantum Kelvin- Helmholtz instability</i>	(12h40-12h55) 12.PS7.2.2 Ben-Chuan Lin <i>Spin-polarized p- wave superconductivity in the kagome material RbV₃Sb₅</i>	(12h40-12h55) 12.PS7.3.2 Yufan Li <i>Determination of spin-triplet superconductivity with phase-sensitive experiments</i>	(12h40-12h55) 12.PS7.4.2 Vesna Mitrovic <i>Orbital glass conceals missing magnetic entropy in a relativistic Mott insulator</i>	(12h40-12h55) 12.PS7.5.2 Guratinder Kaur <i>Magnetoelastic dynamics in Spin- Jahn Teller driven antiferromagnet: CoTi₂O₅</i>	(12h40-12h55) 12.PS7.6.2 Robin Dolleman <i>Continuous sub- millikelvin cooling of nanoelectronic devices using a Wigner crystal</i>	(12h40-12h55) 12.PS7.7.2 Meydi Ferrier <i>Supercurrent noise in a phase-biased superconductor - normal ring in thermal equilibrium</i>	(12h40-12h55) 11.PS7.8.2. Pomaransk David <i>Time-bin architecture for electronic qubits with quantum-Hall edge channels</i>	(12h40-12h55) 12.PS7.9.2 Shu Guo <i>Quantum Fluctuation enhanced Millikelvin Magnetic Refrigeration in Triangular Lattice Magnet</i>
(12h55-13h10) 12.PS7.1.3 Yosuke Minowa <i>Kelvin wave excitation on quantized vortices in superfluid helium</i>	(12h55-13h10) 12.PS7.2.3 Shingo Yonezawa <i>Field-angle-resolved calorimetry of the pristine and Nb- substituted CsV₃Sb₅ Kagome superconductors</i>	(12h55-13h10) 12.PS7.3.3 Che-H Ku <i>Point-contact Andreev-reflection spectroscopy of compressed superconducting thin flakes inside a diamond anvil cell</i>	(12h55-13h10) 12.PS7.4.3 Changhee Lee <i>Odd-parity itinerant antiferromagnets by space group symmetry</i>	(12h55-13h10) 12.PS7.5.3 Kiyu Fukui <i>Unveiling new magnetic phases in 3D extended Kitaev models</i>	(12h55-13h10) 12.PS7.6.3 Alexandre Delattre <i>Low temperature fluctuations of a mesoscopic mechanical mode</i>	(12h55-13h10) 12.PS7.7.3 Jose Antonio Moreno <i>Feedback driven Josephson microscope</i>	(12h55-13h10) 11.PS7.8.3. Li Lu <i>Experimental exploration of the Fu-Kane scheme of topological quantum computation</i>	(12h55-13h10) 12.PS7.9.3 Clement Geffroy <i>An ultra-compact dilution refrigerator for rapid quantum device characterization and education</i>
(13h10-13h25) 12.PS7.1.4 Igor Todoshchenko <i>Quantum fluctuations in helium adsorbed on nanotube</i>	(13h10-13h25) 12.PS7.2.4 Hiroshi Kontani <i>Unconventional density waves, exotic superconductivity and quantum criticality in kagome metals and bilayer nickelate superconductors</i>	(13h10-13h25) 12.PS7.3.4 Koichiro Ienaga <i>Quantum and Thermal Fluctuations in Two-Dimensional Superconductors studied by the Nernst effect</i>	(13h10-13h25) 12.PS7.4.4 Ying-Ming Xie <i>Photon-drag photovoltaic effects and quantum geometric nature</i>	(13h10-13h25) 12.PS7.5.4 Slavomir Gabani <i>Evidence for ferrons formation in the heavy fermion metal CeB₆ with dynamic charge stripes</i>	(13h10-13h25) 12.PS7.6.4 Zhiqiang Hu <i>Local Characterization of Electric Field Induced Dielectric Constant Changes in (Ba,Sr)TiO₃ Detected by Microwave Impedance Microscopy</i>	(13h10-13h25) 12.PS7.7.4 Andrei Mazanik <i>Interfacial spin-orbit coupling in superconducting hybrid systems</i>	(13h10-13h25) 11.PS7.8.4. Giacomo Marmorini <i>Spiral quantum state tomography of quantum many- body states and entanglement measurement</i>	(13h10-13h25) 12.PS7.9.4 Andrew Fefferman <i>Aluminum nuclear- demagnetization refrigerator for continuous cooling below 1 mK</i>

13h25-14h00 Lunch

14h00-15h45 Poster session

	Semiplenary Session 9	
	Auditorium 2 level 4. Chair Floriana Lombardi	Luxua 1 level 3. Chair Richard Haley
15h45	(15h45-16h20) Rebeca Ribeiro, <i>Impact of the angular alignment on the crystal field and intrinsic doping of bilayer graphene/BN heterostructures</i>	(15h45-16h20) Makoto Tsubota, <i>Quantum Hydrodynamics and Turbulence: A Journey from Legacy to Future</i>
16h20	(16h20-16h55) Javad Shabani, <i>Gate-tunable Superconducting Diode Effect</i>	(16h20-16h55) Vladimir Eltsov, <i>Nanomechanical probes of vortex dynamics in quantum fluids</i>

16h55-17h25 Coffee

Tuesday, 12 August, Afternoon Parallel Sessions

Room 1A level 5 12.PS8.1. Superfluid helium-IV Chair: Manuel Arrayas	Auditorium 1 level 4 12.PS8.2. Thin films and interfaces-III (COST superqumap.eu) Chair: Thilo Bauch	Auditorium 2 level 4 12.PS8.3. Oxides and arsenides Chair: Javier Villegas	Luxua 1 level 3 12.PS8.4. Nickelates-II Chair: Yukio Tanaka	Luxua 2 level 3 12.PS8.5. Topological States, and Anomalous Hall Effect Chair: Gemma Rius	Room 2 level 5 12.PS8.6. Topology and Quantum Materials-III Chair: Javad Shabani	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: Makoto Naka	Room level 2 12.PS8.9. Superconducting quantum circuits-IV Chair: Anasua Chatterjee	Room 4 level 5 12.PS8.10. LT detectors-II Chair: Jian Huang
(17h25-17h50). 12.PS8.1.1. Junko Taniguchi <i>Property of superfluid and flow of ^4He confined in a nanometer-sized channel</i>	(17h25-17h50). 12.PS8.2.1. Maria Iavarone <i>Engineering Nb-Au Interfaces for Superconducting Qubits</i>	(17h25-17h50). 12.PS8.3.1. Yoshiteru Maeno <i>Bridging various strain-related responses of superconducting Sr_2RuO_4</i>	(17h25-17h50). 12.PS8.4.1. Kazuhiko Kuroki <i>Theoretical study on high T_c unconventional superconductivity in multilayer nickelates $\text{La}_3\text{Ni}_2\text{O}_7$ and $\text{La}_4\text{Ni}_3\text{O}_{10}$</i>	(17h25-17h50). 12.PS8.5.1. Paula Giraldo <i>Fermiology of the charge density wave compound TaTe_4 and its signatures of non-trivial topological states</i>	(17h25-17h50). 12.PS8.6.1. Wei-Li Lee <i>Nonlinear and nonreciprocal transport effects in untwinned thin films of topological Weyl metal SrRuO_3</i>	(17h25-17h50). 12.PS8.7.1. Miguel Angel Cazalilla <i>Probing Magnetic and Triplet Correlations in Spin-Split Superconductors with Magnetic Impurities</i>	(17h25-17h50). 12.PS8.8.1. Georgios Katsaros <i>Charge and spin in planar Germanium</i>	(17h25-17h50). 12.PS8.9.1. Simone Gasparinetti <i>Quantum thermodynamics with superconducting circuits: fundamental insights and applications</i>	(17h25-17h50). 12.PS8.10.1. Sergey Kubatkin <i>Sensing microwave photons with scalable epitaxial graphene bolometers</i>
(17h50-18h05) 12.PS8.1.2. Igor Zaliznyak <i>Bogolyubov-Feynman-Pitaevskii spectrum and decays of phonon-roton quasiparticles in superfluid helium</i>	(17h50-18h05) 12.PS8.2.2. Nofar Fridman <i>Anomalous Thickness Dependence of the Vortex Pearl Length in Few-Layer NbSe_2</i>	(17h50-18h05) 12.PS8.3.2. Ilya Sochnikov <i>Superelastic Microstructures of Superconducting Strontium Titanate</i>	(17h50-18h05) 12.PS8.4.2. Yu-Te Hsu <i>Transport phase diagram and anomalous metallicity in superconducting infinite-layer nickelates</i>	(17h50-18h05) 12.PS8.5.2. Hiroaki Ishizuka <i>Chirality-related anomalous hall effect in pyrochlore magnets</i>	(17h50-18h05) 12.PS8.6.2. Armand Devillez <i>Bond-dependent interactions and ill-ordered state in the honeycomb cobaltate $\text{BaCo}_2(\text{AsO}_4)_2$</i>	(17h50-18h05) 12.PS8.7.2. Viktoriia Kornich <i>Non-Hermitian superconductivity: stability, generation and detection</i>	(17h50-18h05) 12.PS8.8.2. Andreas K. Hüttel <i>Transport spectroscopy of MoS_2 nanotube quantum dots</i>	(17h50-18h05) 12.PS8.9.2. Shohei Miyakoshi <i>Advancing Quantum Circuit Optimization Through Density Matrix Renormalization Group Techniques</i>	(17h50-18h05) 12.PS8.10.2. Kelvin Ramos <i>Development of photon detectors based on granular aluminum superconducting resonators</i>
(18h05-18h20) 12.PS8.1.3. Emil Varga <i>Decay of Two-Dimensional Quantum Turbulence</i>	(18h05-18h20) 12.PS8.2.3. Michal Šindler <i>Vortex mass in high-T_c superconductors</i>	(18h05-18h30) 12.PS8.3.3. Changhee Lee <i>Superconductivity and Antiferromagnetism in CeRh_3As_2: Unification through type-II van Hove singularity</i>	(18h05-18h20) 12.PS8.4.3. Daoxin Yao <i>Models and superconductivity of bilayer and trilayer nickelate superconductors</i>	(18h05-18h20) 12.PS8.5.3. Sugata Chowdhury <i>Understanding the Quantum Anomalous Hall Effect (QAHE) in 2D-UOTe</i>	(18h05-18h20) 12.PS8.6.3. Miguel Angel Ramos <i>Quest for amorphous superconductors of Bi-Sb alloys by irradiation with swift heavy ions</i>	(18h05-18h20) 12.PS8.7.3. Celia González <i>Signatures of edge states in antiferromagnetic van der Waals Josephson junctions</i>	(18h05-18h20) 12.PS8.8.3. Akong Loh <i>Microwave optomechanics with a carbon nanotube nano-electromechanical resonator</i>	(18h05-18h30) 12.PS8.9.3. Shingo Kono <i>Scalable Superconducting Circuit Optomechanics with Millisecond Quantum Coherence</i>	(18h05-18h20) 12.PS8.10.3. Carlos Pobes <i>Cryogenic radiation detectors base on Transition Edge Sensors</i>
(18h20-18h45) 12.PS8.1.4. Ladislav Skrbek <i>Critical Velocities in Flows of Superfluid ^4He</i>	(18h20-18h45) 12.PS8.2.4. Matthias Eschrig <i>Purely even harmonic Josephson currents due to crossed equal-spin pair transmission</i>	(18h30-18h55) 12.PS8.3.4. Javier Landaeta <i>Quantum oscillations of Sr_2RuO_4 under c-axis uniaxial stress</i>	(18h20-18h45) 12.PS8.4.4. Huiqiu Yuan <i>From Heavy Fermions to Nickelates: Superconductivity, Quantum Criticality, and Strange Metals</i>	(18h20-18h45) 12.PS8.5.4. Nandini Trivedi <i>Detection of anyon braiding through pump-probe spectroscopy</i>	(18h20-18h45) 12.PS8.6.4. Martin Klanjšek <i>Kitaev and Dirac Quantum Spin Liquids in Honeycomb Magnets</i>	(18h20-18h45) 12.PS8.7.4. Jelena Klinovaja <i>From perfect to imperfect poor man's Majoranas in minimal Kitaev chains</i>	(18h20-18h45) 12.PS8.8.4. Gabor Csathy <i>Non-Coulombic Short-Range Potentials and Competing Orders in the Two-dimensional Electron Gas</i>	(18h30-18h55) 12.PS8.9.4. Wilfrid Poirier <i>A primary quantum current standard for the Ampere</i>	(18h20-18h45) 12.PS8.10.4. David Tanner <i>Search for dark-matter axions</i>
(18h45-19h00) 12.PS8.1.5. Luca Cavicchioli <i>Formation of Multiple Quantum Droplets through Capillary Instability</i>	(18h45-19h00) 12.PS8.2.5. Maciej Zgirski <i>A single superconducting vortex on a leash.</i>	(18h55-19h20) 12.PS8.3.5. Hilary Noad <i>Thermodynamic Measurements of Sr_2RuO_4 under Uniaxial Stress</i>	(18h45-19h00) 12.PS8.4.5. Daisuke Inoue <i>Unconventional SDW+CDW order and superconductivity in bilayer nickelate: intra/inter-layer bond-order fluctuations mediated pairing mechanism</i>	(18h45-19h00) 12.PS8.5.5. Guillaume Gervais <i>Observation of Temperature-Independent Anomalous Hall Effect in Thin Bismuth from Near Absolute Zero to 300 K Temperature</i>					

Wednesday, 13 August

	Auditorium level 4
	Plenary session 6. Chair Francisco (Paco) Guinea
09h00	(09h00-09h45) Jim Sauls, <i>The Left Hand of the Electron in Chiral Superfluids and Superconductors</i>
09h45	(09h45-10h30) Pablo Jarillo Herrero, <i>The Magic of Moiré Quantum Matter</i>

10h30-11h00 Coffee break and exhibition

Room 1A level 5 13.PS9.1. Interactions and condensates Chair: Fernando Sols	Luxua2 level 3 13.PS9.2. Cuprates-II Chair: Milorad Milosevic	Luxua1 level 3 13.PS9.3. Thin films and interfaces-IV Chair: Sergey Kubatkin	Auditorium level 4 13.PS9.4. Graphene and twisted systems-II Chair: Dima Geshkenbein	Room 1B level 5 13.PS9.5. Topology and Quantum Materials-IV Chair: Wei Li	Room 2 level 5 13.PS9.6. Unconventional Effects in Superconducting Junctions Chair: Jelena Klinovaja	Room 3 level 5 13.PS9.7. Topology and quantum transport Chair: Miguel Angel Cazalilla	Room level 2 13.PS9.8. Quantum simulation Chair: Simone Gasparinetti	Room 4 level 5 13.PS9.9. Thermometry and refrigeration techniques-IV Chair: David Tanner
(11h00-11h25). 13.PS9.1.1. Lev Haldar Kendrick <i>Emergent physics at ultralow temperatures in a Fermi-Hubbard quantum simulator</i>	(11h00-11h25). 13.PS9.2.1. Javier Villegas <i>SPersistent photoresponse of oxide superconductors</i>	(11h00-11h25). 13.PS9.3.1. Jian Wang <i>Discovery of higher charge superconductivity beyond charge-2e Cooper pairs</i>	(11h00-11h25). 13.PS9.4.1. Dimitri Efetov <i>Revealing electron-electron interactions in graphene at room temperature with the quantum twisting microscope</i>	(11h00-11h25). 13.PS9.5.1. Masatoshi Sato <i>Callan-Rubakov effects in topological insulators</i>	(11h00-11h25). 13.PS9.6.1. Fanming Qu <i>Boundary supercurrent and continuous non-integer Shapiro steps in NiTe₂-based Josephson junctions</i>	(11h00-11h25). 13.PS9.7.1. Christian Spanslatt <i>Electrical noise spectroscopy of magnons in a quantum Hall ferromagnet</i>	(11h00-11h25). 13.PS9.8.1. Yu-Ao Chen <i>Quantum Simulation with Ultracold Atoms</i>	(11h00-11h25). 13.PS9.9.1. Richard Haley <i>Cooling nanoelectronic devices to the sub-mK regime</i>
(11h25-11h50) 13.PS9.1.2. Daniel Barredo <i>Exploring quantum magnetism with dipolar Rydberg atom arrays</i>	(11h25-11h50) 13.PS9.2.2 David Leboeuf <i>Strange metal and spin fluctuations in cuprate superconductors</i>	(11h25-11h50) 13.PS9.3.2 Xianggang Qiu <i>Visualization of skyrmion-superconducting vortex pairs in a chiral magnet-superconductor heterostructure</i>	(11h25-11h50) 13.PS9.4.2 Francisco Guinea <i>Superconductivity in graphene stacks</i>	(11h25-11h50) 13.PS9.5.2 Masaki Uchida <i>In-plane anomalous Hall effect in magnetic Weyl semimetal films</i>	(11h25-11h50) 13.PS9.6.2 Pertti Hakonen <i>Experiments on 1/f noise in normal and superconducting low-dimensional conductors</i>	(11h25-11h50). 13.PS9.7.2. Alfredo Levy Yeyati <i>Emergent topology by Landau level mixing in quantum Hall-superconductor nanostructures</i>	(11h25-11h50) 13.PS9.8.2 Haohua Wang <i>Multiqubit superconducting platform for simulating quantum many-body physics</i>	(11h25-11h50) 13.PS9.9.2 Andrew Casey <i>Immersion cooling quantum materials and quantum devices to sub-mK</i>
(11h50-12h05) 13.PS9.1.3. Daisuke Yamamoto <i>Entropy engineering in SU(N) cold atoms for simulating strongly correlated electron systems</i>	(11h50-12h05) 13.PS9.2.3 Pablo García Talavera <i>STM measurements in UTe₂</i>	(11h50-12h05) 13.PS9.3.3. Laura Greene <i>Planar Tunnel Spectroscopy of CeColns: Investigation of local-moment pairing.</i>	(11h50-12h05) 13.PS9.4.3. Zhen Zhan <i>Robust flat bands in twisted trilayer graphene</i>	(11h50-12h05) 13.PS9.5.3. Kristiana Frei <i>Half-quantized Hall Plateaus in the Confined Geometry of Graphene</i>	(11h50-12h05) 13.PS9.6.3. Shohei Kobayashi <i>Phase control of fermion parity in a quantum dot Josephson junction</i>	(11h50-12h05) 13.PS9.7.3 Anqi Wang <i>Observation of topological Anderson Chern insulator phase in MnBi₄Te₇ monolayer</i>	(11h50-12h05) 13.PS9.8.3. Yue Ban <i>Digital Quantum Simulation of Fermionic Lattice Models with Counterdiabatic Ansatz</i>	(11h50-12h05) 13.PS9.9.3 Omid Sharifi <i>Cooling and thermometry of a semiconductor 2D gas down to 1 mK</i>

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, <i>Increasing the complexity of semiconductor quantum devices</i>
12h40	(12h40-13h10) Bayan Karimi, <i>Bolometric measurements on superconducting quantum thermodynamic setups</i>
13h10	(13h10-13h40) Shuqiu Wang, <i>Quasiparticle Scattering Interference Imaging of Topological Superconductivity in UTe_2</i>
13h40	Closing