CMD29 Oral Presentations

Monday 22 August 2022				
Day	**Time**	**Name**	**Session**	**Abstract Title**
Monday	9:00 AM - 10:00 AM	Professor André Geim	Plenary speaker	Two-dimensional empty space and its exotic properties
Monday	10:00 AM - 11:00 AM	Professor Michael Tobar	Semi-plenary speaker	Precision Metrology with Photons, Phonons and Spins: Answering Major Unsolved Problems in Physics and Advancing Translational Science
Monday	11:30 AM - 12:00 PM	Christopher Eichler	MC23: Superconducting Circuits for Quantum Technologies I	Repeated Quantum Error Correction in a Surface Code Using Superconducting Circuits
Monday	12:00 PM - 12:15 PM	Vladimir Milchakov	MC23: Superconducting Circuits for Quantum Technologies I	A non-perturbative cross-Kerr coupling to achieve high fidelity quantum non-demolition superconducting qubit measurement
Monday	12:15 PM - 12:30 PM	Weixi Zhang	MC23: Superconducting Circuits for Quantum Technologies I	Quantum machine learning using high-quality superconducting qutrits
Monday	2:00 PM - 2:30 PM	Dr. Giampiero Marchegiani	MC23: Superconducting Circuits for Quantum Technologies II	Quasiparticle effects in transmons with gap-asymmetric junctions
Monday	2:30 PM - 2:45 PM	Nguyen Le	MC23: Superconducting Circuits for Quantum Technologies II	Robust quantum computing on qubit arrays with fixed longitudinal coupling
Monday	2:45 PM - 3:00 PM	Elena Lupo	MC23: Superconducting Circuits for Quantum Technologies II	Gate-based parametric single-qubit operations and coherence for the Majorana transmon model
Monday	3:00 PM - 3:15 PM	Guillermo Peñas	MC23: Superconducting Circuits for Quantum Technologies II	Universal distributed quantum gates in microwave links
Monday	4:30 PM - 4:45 PM	Arkady Fedorov	MC23: Superconducting Circuits for Quantum Technologies III	Qubit as a quantum probe of control distortions and temperature
Monday	4:45 PM - 5:00 PM	Dr Manoj Stanley	MC23: Superconducting Circuits for Quantum Technologies III	Characterizing Scattering Parameters of Superconducting Quantum Integrated Circuits at Milli-kelvin Temperatures
Monday	5:00 PM - 5:15 PM	Dr Paul Baity	MC23: Superconducting Circuits for Quantum Technologies III	On the reliability and reduction of error of resonance circle fits
Monday	5:15 PM - 5:30 PM	Prof. Elisabetta Paladino	MC23: Superconducting Circuits for Quantum Technologies III	Supercurrent noise in short ballistic graphene Josephson junctions
Monday	5:30 PM - 5:45 PM	Roy Haller	MC23: Superconducting Circuits for Quantum Technologies III	RF reflectometry of a graphene Josephson junction
Monday	11:30 AM - 12:00 PM	Michael Wimmer	MC21: Bound States in Hybrid Superconductor Nanostructures I	Tunable superconducting coupling of quantum dots via Andreev bound states
Monday	12:00 PM - 12:15 PM	Dr. Rubén Seoane Souto	MC21: Bound States in Hybrid Superconductor Nanostructures I	Magnetism and spin-polarized bound states in semiconductor-superconductor-ferromagnetic wires
Monday	12:15 PM - 12:30 PM	Tudor Stanescu	MC21: Bound States in Hybrid Superconductor Nanostructures I	Proximity-induced superconductivity generated by thin superconducting films: the role of disorder
Monday	2:00 PM - 2:30 PM	Erik Bakkers	MC21: Bound States in Hybrid Superconductor Nanostructures II	Exploring new semiconductor/superconducting hybrid material
Monday	2:30 PM - 2:45 PM	Christian Schönenberger	MC21: Bound States in Hybrid Superconductor Nanostructures II	Negative Spin Cross-Correlation in a Cooper Pair Splitter
Monday	2:45 PM - 3:00 PM	Associate Professor Kasper Grove-Rasmussen	MC21: Bound States in Hybrid Superconductor Nanostructures II	Sub-gap states in hybrid superconductor-semiconductor single and double nanowire devices
Monday	3:00 PM - 3:15 PM	Dr. Peter Makk	MC21: Bound States in Hybrid Superconductor Nanostructures II	Interwire Andreev reflection and Andreev molecule in double InAs nanowires
Monday	3:15 PM - 3:30 PM	Wolfgang Belzig	MC21: Bound States in Hybrid Superconductor Nanostructures II	Theory of topological Andreev states
Monday	4:30 PM - 4:45 PM	Ciprian Padurariu	MC21: Bound States in Hybrid Superconductor Nanostructures III	Theory of transport between superconducting states bound to magnetic impurities
Monday	4:45 PM - 5:00 PM	Benjamin Roussel	MC21: Bound States in Hybrid Superconductor Nanostructures III	Time-frequency representation of dynamical Andreev conversions
Monday	5:00 PM - 5:15 PM	Pablo Burset	MC21: Bound States in Hybrid Superconductor Nanostructures III	Tunable Andreev-conversion of single-electron charge pulses
Monday	5:15 PM - 5:30 PM	Kristján Óttar Klausen	MC21: Bound States in Hybrid Superconductor Nanostructures III	Andreev reflection and electron-hole coherence in proximitized core-shell semiconductor nanowires
Monday	5:30 PM - 5:45 PM	Ian Correa Sampaio	MC21: Bound States in Hybrid Superconductor Nanostructures III	Subgap resonances in monolayer semiconductors with superconducting contacts
Monday	5:45 PM - 6:00 PM	Andriani Keliri	MC21: Bound States in Hybrid Superconductor Nanostructures III	Floquet-Andreev resonances in a voltage-biased Andreev molecule
Monday	11:30 AM - 12:00 PM	Prof. Dr. Roberto Cerbino	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter I	Phase transitions in cell tissues
Monday	12:00 PM - 12:15 PM	Maxime Deforet	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter I	Multiscale analysis of colony expansion in a run-reverse motile bacteria
Monday	12:15 PM - 12:30 PM	Christophe Deroulers	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter I	Predicting the emergent density profile in a stationary nonequilibrium population of polarising and migrating cells
Monday	2:00 PM - 2:30 PM	Prof. Yael Roichman	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter II	Signatures of Non-Equilibrium in Optically Driven Dense Colloidal Suspensions
Monday	2:30 PM - 2:45 PM	Dr Mario Sandoval	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter II	Stiffening of an active solid

Monday	2:45 PM - 3:00 PM	Ms. Ratimanasee Sahu	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter II	Role of local structures in the dynamics of sheared colloidal suspension.
Monday	3:00 PM - 3:30 PM	Alexander Morozov	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter II	Hydrodynamic interactions induce microphase separation in active systems
Monday	4:30 PM - 4:45 PM	Pragya Kushwaha	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter III	Dynamic clustering of colloidal particles in an active bath of bacteria
Monday	4:45 PM - 5:00 PM	Guido Baardink	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter III	Complete absorption of topologically protected waves
Monday	5:00 PM - 5:30 PM	Prof. Lucio Isa	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter III	Reconfigurable active colloids with multi-state dynamics
Monday	5:30 PM - 5:45 PM	Massimo Pica Ciamarra	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter III	Interplay between jamming and MIPS in persistent self-propelling particles
Monday	5:45 PM - 6:00 PM	Marco Polin	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter III	Mixed active-passive suspensions: from particle entrainment to demixing
Monday	11:30 AM - 12:00 PM	Professor Stephen Cheng	MC8: Complex Phases in Soft Matter I	Superlattice Engineering of Giant Molecules: Supramolecular Soft Alloys
Monday	12:00 AM - 12:15 PM	Prof. Shoichi Kutsumizu	MC8: Complex Phases in Soft Matter I	Control of the molecular packing in the Ia3d gyroid phase by siloxane tails and molecular core symmetry
Monday	12:15 PM - 12:30 PM	Prof. Dr. Matthias Lehmann	MC8: Complex Phases in Soft Matter I	Shape-Persistent Mesogens and Intrinsic Void – A New Design Tool for Complex Functional Liquid Crystal Materials
Monday	2:00 PM - 2:30 PM	Alenka Mertelj	MC8: Complex Phases in Soft Matter II	Ferroelectric nematic phases and splay deformation
Monday	2:30PM - 2:45PM	Pierre Nacke	MC8: Complex Phases in Soft Matter II	New Examples of Ferronematic Materials Showing Evidence for the Antiferroelectric Smectic-Z Phase
Monday	2:45 PM - 3:00 PM	Satoshi Aya	MC8: Complex Phases in Soft Matter II	Polarization topology of ferroelectric nematics in confined space
Monday	3:00 PM - 3:15 PM	Mingjun Huang	MC8: Complex Phases in Soft Matter II	Ferroelectric nematic liquid crystals: material development and phase transition study
Monday	3:15 PM - 3:30 PM	Dr. Dharmendra Pratap Singh	MC8: Complex Phases in Soft Matter II	Thermal conductivity of a novel RM 734 ferroelectric nematic material at the ferroelectric-ferroelastic phase transition
Monday	4:30 PM - 5:00 PM	Gaston Garbarino	MC46: Matter Under High Pressure III	Extreme conditions science using the new ID27 beamline at the fourth generation EBS-ESRF
Monday	5:00 PM - 5:15 PM	Dr. B. A. Weinstein	MC46: Matter Under High Pressure III	Why is the high-pressure 4-fold to 6-fold transition correlated to softening of zone-edge TA phonons?
Monday	5:15 PM - 5:45 PM	Professor Valery Levitas	MC46: Matter Under High Pressure III	Plastic Strain Induced Phase Transformations under High Pressure: Four-Scale Theory, Experiments, and Phenomena
Monday	11:30 AM - 12:00 PM	Núria Aliaga-Alcalde	MC12: Physics in 2D Nanoarchitectonics I	Summary and prospects for curcuminoids in electronic devices and as 2D materials
Monday	12:00 PM - 12:15 PM	Linghao Yan	MC12: Physics in 2D Nanoarchitectonics I	Fabrication and Characterization of 2D Metal-Organic Network on Weakly Interacting 2D Materials
Monday	12:15 PM - 12:30 PM	Konstantin Shchukin	MC12: Physics in 2D Nanoarchitectonics I	C_60 mono layer encapsulated in between hBN and graphene monolayers: electronic and vibrational properties
Monday	2:00 PM - 2:30 PM	Prof Mads Brandbyge	MC12 : Physics in 2D Nanoarchitectonics II	First principles calculations of current flow and control in 2D molecular networks
Monday	2:30 PM - 2:45 PM	Dr. David Serrate	MC12 : Physics in 2D Nanoarchitectonics II	Controlling the ground state of quantum spins over 2D stacks of polar insulators
Monday	2:45 PM - 3:00 PM	Rodrigo E. Menchon	MC12 : Physics in 2D Nanoarchitectonics II	Metallic graphene nanoribbons with embedded spins
Monday	3:00 PM - 3:15 PM	Sofia Parreiras	MC12 : Physics in 2D Nanoarchitectonics II	Tailoring the magnetic anisotropy of mono and dinuclear lanthanide metal-organic networks by metal exchange
Monday	3:15 PM - 3:30 PM	María Tenorio	MC12 : Physics in 2D Nanoarchitectonics II	Doped Nanoporous graphene as a new material for ultrasharp superlattice heterojunctions
Monday	11:30 AM - 12:00 PM	Prof. Dr. Mauro Brotons I Gisbert	MC16: Spin Control in Twisted Van Der Waals Heterostructures I	Strongly correlated states and tuneable moiré bands in TMD heterostructures
Monday	12:00 PM - 12:15 PM	Astrid Weston	MC16: Spin Control in Twisted Van Der Waals Heterostructures I	Electronic properties of marginally twisted 2D semiconductors
Monday	12:15 PM - 12:30 PM	Endre Tóvári	MC16: Spin Control in Twisted Van Der Waals Heterostructures I	Tuning van der Waals heterostructures by pressure
Monday	2:00 PM - 2:30 PM	Xin Guo	MC19: Advances in the Casimir Force and Heat Transfer Phenomena II	Quantum Friction in the Presence of a Perfectly Conducting Plate
Monday	2:30 PM - 3:00 PM	Kim Kimball Milton	MC19: Advances in the Casimir Force and Heat Transfer Phenomena II	Quantum and Casimir Friction: Energetics and Forces

Monday	3:00 PM - 3:30 PM	Matthias Kruger	MC19: Advances in the Casimir Force and Heat Transfer Phenomena II	QED fluctuation phenomena for non-reciprocal media in and out of equilibrium
Monday	4:30 PM - 5:00 PM	Prof David Bishop	MC19: Advances in the Casimir Force and Heat Transfer Phenomena III	Casimir Physics: Quantum Metrology and the Casimir Energy
Monday	5:00 PM - 5:30 PM	Dr. Sathwik Bharadwaj	MC19: Advances in the Casimir Force and Heat Transfer Phenomena III	Pico-electrodynamics in Silicon
Monday	5:30 PM - 5:45 PM	Johannes Fiedler	MC19: Advances in the Casimir Force and Heat Transfer Phenomena III	Impact of dispersion forces on matter-wave lithography
Monday	11:30 AM - 12:00 PM	Núria Aliaga-Alcalde	MC12: Physics in 2D Nanoarchitectonics I	Summary and prospects for curcuminoids in electronic devices and as 2D materials
Monday	12:00 PM - 12:15 PM	Linghao Yan	MC12: Physics in 2D Nanoarchitectonics I	Fabrication and Characterization of 2D Metal-Organic Network on Weakly Interacting 2D Materials
Monday	12:15 PM - 12:30 PM	Konstantin Shchukin	MC12: Physics in 2D Nanoarchitectonics I	C_60 mono layer encapsulated in between hBN and graphene monolayers: electronic and vibrational properties
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Monday	3:00 PM - 3:15 PM	Sofia Parreiras	MC12: Physics in 2D Nanoarchitectonics II	Tailoring the magnetic anisotropy of mono and dinuclear lanthanide metal-organic networks by metal exchange
Monday	3:15 PM - 3:30 PM	María Tenorio	MC12: Physics in 2D Nanoarchitectonics II	Doped Nanoporous graphene as a new material for ultrasharp superlattice heterojunctions
Monday	4:30 PM - 5:00 PM	Dr. Gabriela Borin Barin	MC12: Physics in 2D Nanoarchitectonics III	Bottom-up fabrication of graphene nanoribbons: from ultra-high-vacuum to device integration
Monday	5:00 PM - 5:15 PM	Fei Gao	MC12: Physics in 2D Nanoarchitectonics III	Control of the local magnetic states in graphene with voltage and gating
Monday	5:15 PM - 5:30 PM	José Ramón Durán Retamal	MC12: Physics in 2D Nanoarchitectonics III	Nanoporous Graphene Field Effect Transistors and Short Channel Effects
Monday	5:30 PM - 5:45 PM	Dr Rossella Zaffino	MC12: Physics in 2D Nanoarchitectonics III	Integrating Ccmoids based wires and 2D COF in silicon for opto electronic applications
Monday	5:45 PM - 6:00 PM	Kieran Spruce	MC12: Physics in 2D Nanoarchitectonics III	Oxygen related defects on silicon and their nanostructuring
Monday	11:30 AM - 12:00 PM	Edward Hardy	MC28: Condensed-matter Quantum Technology on the Hunt for Dark Matter I	Dark matter: motivation, candidates and experimental prospects
Monday	12:00 PM - 12:30 PM	Dr David Marsh	MC28: Condensed-matter Quantum Technology on the Hunt for Dark Matter I	Detecting "Axion" Dark Matter with Novel Materials
Monday	2:00 PM - 2:30 PM	Dr. Chelsea Bartram	MC28: Condensed-matter Quantum Technology on the Hunt for Dark Matter II	Exploring the realm of the axion with quantum devices in ADMX
Monday	2:30 PM - 3:00 PM	Dr Paolo Franchini	MC28: Condensed-matter Quantum Technology on the Hunt for Dark Matter II	QUEST-DMC: Simulation studies for the detection of sub-GeV dark matter with a superfluid Helium-3 calorimeter.
Monday	3:00 PM - 3:15 PM	Dr Paul J Smith	MC28: Condensed-matter Quantum Technology on the Hunt for Dark Matter II	Quantum Sensors for the Hidden Sector (QSHS)
Monday	3:15 PM - 3:30 PM	Dr Alexandre Zagoskin	MC28: Condensed-matter Quantum Technology on the Hunt for Dark Matter II	Towards the Heisenberg limit in microwave photon detection by a qubit array
Monday	11:30 AM - 12:00 PM	Stefan Eisebitt	MC47: X-ray FreeElectron Lasers for Condensed Matter & Materials Physics (XFELs for CMMP) I	Ultrafast optical generation and control of magnetic skyrmions
Monday	12:00 PM - 12:30 PM	Prof. Matteo Mitrano	MC47: X-ray FreeElectron Lasers for Condensed Matter & Materials Physics (XFELs for CMMP) I	Probing light-driven superconductors with ultrafast resonant inelastic x-ray scattering
Monday	2:00 PM - 2:30 PM	Laurenz Rettig	MC47: X-ray Free Electron Lasers for Condensed Matter & Materials Physics (XFELs for CMMP) II	Disentangling coupled degrees of freedom in correlated materials using resonant x-ray diffraction
Monday	2:30 PM - 3:00 PM	Hermann Durr	MC47: X-ray Free Electron Lasers for Condensed Matter & Materials Physics (XFELs for CMMP) II	Non-equilibrium generation of spin-wave solitons in magnetic nanostructures
Monday	3:00 PM - 3:30 PM	Dr Allan Johnson	MC47: X-ray Free Electron Lasers for Condensed Matter & Materials Physics (XFELs for CMMP) II	Ultrafast X-ray Coherent Imaging of the Light-Induced Phase Transition in VO2
Monday	3:30 PM - 4:00 PM	Professor Jasper Van Thor	MC47: X-ray Free Electron Lasers for Condensed Matter & Materials Physics (XFELs for CMMP) II	Coherent control of protein structural dynamics with X-ray crystallographic observation
Monday	11:30 AM - 12:00 PM	Pavel Jelinek	MC18: Developments at the Frontiers of High-resolution Scanning Probe Microscopy I	High-resolution SPM imaging of molecules with a functionalized probe

Monday	12:00 PM - 12:15 PM	Timothy Brown	MC18: Developments at the Frontiers of High-resolution Scanning Probe Microscopy I	Intramolecular force mapping at room temperature
Monday	12:15 PM - 12:30 PM	Dr Alex Saywell	MC18: Developments at the Frontiers of High-resolution Scanning Probe Microscopy I	Molecular-substrate systems studied by scanning tunnelling microscopy: Spatial, energetic, and temporal resolution
Monday	2:00 PM - 2:30 PM	Sebastian Loth	MC18: Developments at the Frontiers of High-resolution Scanning Probe Microscopy II	Dynamics of charges, spins and phonons captured by ultrafast scanning tunneling microscopy
Monday	2:30 PM - 2:45 PM	Filipe Junqueira	MC18: Developments at the Frontiers of High-resolution Scanning Probe Microscopy II	Bias-induced suppression of tip relaxation and atom manipulation
Monday	2:45 PM - 3:00 PM	Mr Haoxuan Ding	MC18: Developments at the Frontiers of High-resolution Scanning Probe Microscopy II	Perturbational Imaging of Molecules with the Scanning Tunneling Microscope
Monday	3:00 PM - 3:15 PM	Phil Blowey	MC18: Developments at the Frontiers of High-resolution Scanning Probe Microscopy II	Measuring the change in reactivity of a single molecule: Does The Bottom Effect The Top?
Monday	3:15 PM - 3:30 PM	Matthew Edmondson	MC18: Developments at the Frontiers of High-resolution Scanning Probe Microscopy II	Quantifying the diffusion of porphyrins on Au(111): A temperature-dependent STM study
Monday	4:30 PM - 4:45 PM	Leonhard Grill	MC18: Developments at the Frontiers of High-resolution Scanning Probe Microscopy III	Controlled transfer of a single molecule between two independent STM tips
Monday	4:45 PM - 5:00 PM	Philipp Rahe	MC18: Developments at the Frontiers of High-resolution Scanning Probe Microscopy III	The (2×1) reconstruction of calcite(104)
Monday	5:00 PM - 5:15 PM	Edward Dunn	MC18: Developments at the Frontiers of High-resolution Scanning Probe Microscopy III	Simulated imaging of submolecular structure in molecules with high topographic variation
Monday	5:15 PM - 5:30 PM	Prof Chi-Ming Yim	MC18: Developments at the Frontiers of High-resolution Scanning Probe Microscopy III	A surface-polarity-driven valence-ordered non-periodic surface reconstruction
Monday	5:30 PM - 5:45 PM	James Kerfoot	MC18: Developments at the Frontiers of High-resolution Scanning Probe Microscopy III	Mapping and manipulating ferroelectric domains in parallel stacked hexagonal boron nitride with AFM.
Monday	5:45 PM - 6:00 PM	Philip Moriarty	MC18: Developments at the Frontiers of High-resolution Scanning Probe Microscopy III	A Fourier-free approach to k-space: Can single-point tunnel spectra measure dispersion?
Monday	11:30 AM - 12:00 PM	Prof. Dr. Vladimir Fomin	MC13: Topological and Geometrical Effects in Complex Nanostructures I	Topological transitions in 3D superconductor nanoarchitectures
Monday	12:00 PM - 12:30 PM	Victor Kagalovsky	MC13: Topological and Geometrical Effects in Complex Nanostructures I	Relevant perturbations in a topological insulator.
Monday	2:00 PM - 2:15 PM	Igor Bogush	MC13: Topological and Geometrical Effects in Complex Nanostructures II	Optimization of the hysteresis effect in Nb superconductor open nanotubes
Monday	2:15 PM - 3:30 PM	Vladimir Enaldiev	MC13: Topological and Geometrical Effects in Complex Nanostructures II	Electric field control of domain wall network in twisted bilayers of transition metal dichalcogenides
Monday	2:30 PM - 3:00 PM	Jaakko Nissinen	MC13: Topological and Geometrical Effects in Complex Nanostructures II	Geometric anomalies in non-relativistic topological matter
Monday	3:00 PM - 3:15 PM	Gian Paolo Papari	MC13: Topological and Geometrical Effects in Complex Nanostructures II	Quantum interference affects charge distribution in multiply- connected mesoscopic samples
Monday	3:15 PM - 3:30 PM	Igor Bogush	MC13: Topological and Geometrical Effects in Complex Nanostructures II	Topology effects on the acoustic phonon spectra in nanostructures
Monday	3:30 PM - 3:45 PM	Prof. Dr. Erich Runge	MC13: Topological and Geometrical Effects in Complex Nanostructures II	Structural and Optical Properties of Gold Nanosponges
Monday	3:45 PM - 4:00 PM	Dr Ruibin Zhang	MC13: Topological and Geometrical Effects in Complex Nanostructures II	Orientational transitions of discotic columnar liquid crystals in cylindrical pores
Monday	11:30 AM - 12:30 PM	Professor Michael Pepper	MC40: Strongly Disordered Insulators I	Interactions, Disorder and Localization in 2D and 1D
Monday	2:00 PM - 2:45 PM	John Chalker	MC40: Strongly Disordered Insulators II	Anderson criticality without fine tuning
Monday	2:45 PM - 3:30 PM	Victor Kagalovsky	MC40: Strongly Disordered Insulators II	Compatible relevant perturbations in the strongly interacting 1D system: a variety of fractional conductances
Monday	4:30 PM - 5:00 PM	Dr Luca Sapienza	MC40: Strongly Disordered Insulators III	Anderson localisation of visible light on a chip
Monday	5:00 PM - 5:30 PM	Arnab Roy	MC40: Strongly Disordered Insulators III	Probing BKT physics in a phase fluctuating 2D superconductor with Nernst effect
Monday	11:30 AM - 12:00 PM	Anton Akhmerov	MC41: Real Space Simulations of Topological Matter and Disordered Materials I	Geometry optimization of quantum devices: spin qubits and topological superconductors
Monday	12:00 PM - 12:30 PM	Johannes Lischner	MC41: Real Space Simulations of Topological Matter and Disordered Materials I	Electronic spectra of complex materials from real-space simulations

Monday	2:00 PM - 2:30 PM	Simon Trebst	MC41: Real Space Simulations of Topological Matter and Disordered Materials II	Universal principles of moiré band structures
Monday	2:30 PM - 2:45 PM	Dr Leone Di Mauro Villari	MC41: Real Space Simulations of Topological Matter and Disordered Materials II	Non perturbative numerical simulation of the non-linear optical response of type-II 2D Weyl materials
Monday	2:45 PM - 3:00 PM	Mr. João Pedro Santos Pires	MC41: Real Space Simulations of Topological Matter and Disordered Materials II	Signatures of Vacancy-Induced Nodal States in T -Symmetric Three-Dimensional Weyl Electrons
Monday	3:00 PM - 3:15 PM	Francisco Brito	MC41: Real Space Simulations of Topological Matter and Disordered Materials II	Spectral Simulation of Spin Liquids
Monday	3:15 PM - 3:30 PM	Emmanuel Gottlob	MC41: Real Space Simulations of Topological Matter and Disordered Materials II	Hubbard Model for Quasicrystalline Potentials
Monday	4:30 PM - 5:00 PM	Annica Black-Schaffer	MC41: Real Space Simulations of Topological Matter and Disordered Materials III	Disorder-robust phase crystal in high-temperature cuprate superconductors from topology and strong correlations
Monday	5:00 PM - 5:15 PM	Simão Meneses João	MC41: Real Space Simulations of Topological Matter and Disordered Materials III	Exploring the disorder self-energy with KITE: from the Gade singularity in graphene to disorder-enhanced superconductivity
Monday	5:15 PM - 5:30 PM	Bert Jorissen	MC41: Real Space Simulations of Topological Matter and Disordered Materials III	Large scale tight-binding calculations on deformed TMD monolayers
Monday	5:30 PM - 5:45 PM	Ms Maxine McCarthy	MC41: Real Space Simulations of Topological Matter and Disordered Materials III	Topological Physics in Finite Graphene Structures: Theory and Experiment
Monday	5:45 PM - 6:00 PM	J. M. Alendouro Pinho	MC41: Real Space Simulations of Topological Matter and Disordered Materials III	Bloch Oscillations in Disordered Mesoscopic Devices
Monday	11:30 AM - 12:00 PM	Andrii Chumak	MC44: New Perspectives in Magnonics, from 2D to 3D Systems I	Out-of-plane nano-magnonics
Monday	12:00 PM - 12:15 PM	Gianluca Gubbiotti	MC44: New Perspectives in Magnonics, from 2D to 3D Systems I	Exploring the third dimension in magnonics
Monday	12:15 PM - 12:30 PM	Dr Kevin Fripp	MC44: New Perspectives in Magnonics, from 2D to 3D Systems I	Dark-mode based chiral resonant magnonic devices: Comparison of the backward and forward volume and Damon-Eshbach geometries
Monday	2:00 PM - 2:30 PM	Katrin Schultheiss	MC44: New Perspectives in Magnonics, from 2D to 3D Systems II	Neuromorphic computing with magnons
Monday	2:30 PM - 2:45 PM	Hanna Reshetniak	MC44: New Perspectives in Magnonics, from 2D to 3D Systems II	Study of the edge spin-waves in the crescent-shape ferromagnetic nanorods in dependence on the bias magnetic field orientation
Monday	2:45 PM - 3:15 PM	Prof Giovanni Carlotti	MC44: New Perspectives in Magnonics, from 2D to 3D Systems II	Magnonic eigenmodes of laterally confined topological spin-structures in presence of interfacial Dzyaloshisnhkii-Moriya interaction
Monday	3:15 PM - 3:30 PM	Mateusz Gołębiewski	MC44: New Perspectives in Magnonics, from 2D to 3D Systems II	Self-imaging based logic operations
Monday	4:30 PM - 5:00 PM	Peter Fischer	MC44: New Perspectives in Magnonics, from 2D to 3D Systems III	Exploring novel 2D and 3D topological spin textures with advanced x-ray spectromicroscopies
Monday	5:00 PM - 5:15 PM	Will Branford	MC44: New Perspectives in Magnonics, from 2D to 3D Systems III	Multilayered Artificial Spin-Vortex Ice for Beyond-2D Reconfigurable Magnonics
Monday	5:15 PM - 5:30 PM	Mohammad Alneari	MC44: New Perspectives in Magnonics, from 2D to 3D Systems III	Current-induced resonance in long conductive ferromagnetic nano-wires

Tuesday 23 August 2022				
Day	**Time**	**Name**	**Session**	**Abstract Title**
Tuesday	9:00 AM - 10:00 AM	Dr Matthias Troyer	Plenary Speaker	A quantum computing future for condensed matter physics
Tuesday	10:00 AM - 11:00 AM	Professor Päivi Törmä	Semi-plenary Speaker	New perspectives on quantum geometry, superconductivity and Bose-Einstein condensation
Tuesday	10:00 AM - 11:00 AM	Prof. Luis Hueso	Semi-plenary Speaker	Spintronics with low symmetry materials
Tuesday	11:30 AM - 12:00 PM	Prasanna Pakkiam	MC23: Superconducting Circuits for Quantum Technologies IV	Measurement driven quantum clock implemented with a superconducting qubit
Tuesday	12:00 PM - 12:15 PM	Prof. Moshe Goldstein	MC23: Superconducting Circuits for Quantum Technologies IV	Photon-Instanton Collider Implemented by a Superconducting Circuit: Splitting a Single Photon
Tuesday	12:15 PM - 12:30 PM	María Hita Pérez	MC23: Superconducting Circuits for Quantum Technologies IV	Quasi Bound-State in the continuum in a heavy fluxonium qutrit
Tuesday	2:00 PM - 2:30 PM	Nicolò Crescini	MC23: Superconducting Circuits for Quantum Technologies V	Evidence of dual Shapiro steps in a Josephson junctions array
Tuesday	2:30 PM - 2:45 PM	Arpit Ranadive	MC23: Superconducting Circuits for Quantum Technologies V	Nonlinear quantum optics with Josephson meta-materials
Tuesday	2:45 PM - 3:00 PM	Mr. Cong Fu	MC23: Superconducting Circuits for Quantum Technologies V	Design and fabrication of high kinetic inductance parametric amplifier
Tuesday	3:00 PM - 3:15 PM	Mr Searbhán Ó Peatáin	MC23: Superconducting Circuits for Quantum Technologies V	Analysis of Theoretical and Experimental Performance of Travelling Wave JPA's in the Three Wave Mixing Regime with Considerations of Fabrication Tolerances
Tuesday	3:15 PM - 3:30 PM	Dr. Kyung Ho Kim	MC23: Superconducting Circuits for Quantum Technologies V	Coherent quantum phase slip qubits coupled to superconducting resonators
Tuesday	4:30 PM - 4:45 PM	Denis Basko	MC23: Superconducting Circuits for Quantum Technologies VI	Thermal bistability in local microwave heating of a superconductor
Tuesday	4:45 PM - 5:00 PM	Dr. Gianluca Rastelli	MC23: Superconducting Circuits for Quantum Technologies VI	Engineering the speedup of quantum tunneling in Josephson systems via dissipation
Tuesday	5:00 PM - 5:15 PM	Laith Meti	MC23: Superconducting Circuits for Quantum Technologies VI	Near quantum limited superconducting flux tunable sensors using niobium nanobridge rf SQUIDs working towards single spin and single photon detection
Tuesday	5:15 PM - 5:30 PM	Björn Kubala	MC23: Superconducting Circuits for Quantum Technologies VI	Quantum Synchronization of Josephson Photonics Devices with Shot Noise
Tuesday	5:30 PM - 6:30 PM	Professor Henrik Nordborg	Semi-plenary Speaker	Returning to a vital planet: using thermodynamics to define sustainability.
Tuesday	5:30 PM - 6:30 PM	Professor Kartik Srinivasan	Semi-plenary: Professor Kartik Srinivasan	Towards quantum and classical light sources and transducers at any wavelength using nonlinear nanophotonics
Tuesday	11:30 AM - 12:00 PM	Leonid Glazman	MC21: Bound States in Hybrid Superconductor Nanostructures IV	Microwave response of a bound state in a hybrid superconductor nanostructure
Tuesday	12:00 PM - 12:15 PM	Wesdorp Jaap	MC21: Bound States in Hybrid Superconductor Nanostructures IV	Microwave spectroscopy of interacting spins in Andreev bound states
Tuesday	12:15 PM - 12:30 PM	Jens Paaske	MC21: Bound States in Hybrid Superconductor Nanostructures IV	Inductive microwave response of Yu-Shiba-Rusinov states
Tuesday	2:00 PM - 2:15 PM	Janis Siebrecht	MC21: Bound States in Hybrid Superconductor Nanostructures V	Probing tunneling processes into YSR states with microwaves
Tuesday	2:15 PM - 2:30 PM	Marta Pita-Vidal	MC21: Bound States in Hybrid Superconductor Nanostructures V	Direct coherent control of an Andreev spin-orbit qubit
Tuesday	2:30 PM - 2:45 PM	Manas Ranjan Sahu	MC21: Bound States in Hybrid Superconductor Nanostructures V	Microwave spectroscopy of Andreev states in a InAs nanowire Josephson weak link close to pinch-off
Tuesday	2:45 PM - 3:00 PM	Francisco Jesús Matute-Cañadas	MC21: Bound States in Hybrid Superconductor Nanostructures V	Signatures of interactions in the Andreev spectrum of nanowire Josephson junctions
Tuesday	3:00 PM - 3:15 PM	Luca Chirolli	MC21: Bound States in Hybrid Superconductor Nanostructures V	SWAP gate between a Majorana qubit and a parity-protected superconducting qubit
Tuesday	3:15 PM - 3:30 PM	Jan Behrends	MC21: Bound States in Hybrid Superconductor Nanostructures V	Sachdev-Ye-Kitaev circuits for braiding and charging Majorana zero modes
Tuesday	4:30 PM - 5:00 PM	Eduardo Lee	MC21: Bound States in Hybrid Superconductor Nanostructures VI	Heating effects in hybrid superconductor-semiconductor nanowire devices
Tuesday	5:00 PM - 5:15 PM	Full Professor Rosa Lopez	MC21: Bound States in Hybrid Superconductor Nanostructures VI	The best task performance in a superconducting hybrid machine
Tuesday	5:15 PM - 5:30 PM	Piotr Majek	MC21: Bound States in Hybrid Superconductor Nanostructures VI	Electronic and thermoelectric transport through hybrid double quantum dot nanostructure with Majorana bound states
Tuesday	5:30 PM - 5:45 PM	Kacper Wrześniewski	MC21: Bound States in Hybrid Superconductor Nanostructures VI	Numerical renormalization group study of the Loschmidt echo in quenched quantum impurity systems
Tuesday	5:45 PM - 6:00 PM	Di Xu	MC21: Bound States in Hybrid Superconductor Nanostructures VI	Direct measurement of the Andreev Bound State spin during the Singlet-Doublet transition
Tuesday	11:30 AM - 12:00 PM	Prof Andela Saric	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter IV	One becomes two: non-equilibrium assemblies that split cells across evolution
Tuesday	12:00 PM - 12:15 PM	Dr Jack Binysh	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter IV	Active elastocapillarity in soft solids with negative surface tension
Tuesday	12:15 PM - 12:30 PM	José Martín-Roca	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter IV	Simulating active agents under confinement with Dissipative Particles (hydro)Dynamics

Tuesday	4:30 PM - 5:00 PM	Dr Mark Miller	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter VI	Re-entrant percolation in active Brownian colloids
Tuesday	5:00 PM - 5:15 PM	Dr. Jyoti Sharma	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter VI	Collective dynamics of self-propelled camphor rotors
Tuesday	5:15 PM - 5:30 PM	Felix Höfling	MC6: Emergent Phenomena in Driven Soft, Active and Biological Matter VI	Spontaneous trail formation in populations of signalling active walkers
Tuesday	11:30 AM - 12:00 PM	Weihua Li	MC8: Complex Phases in Soft Matter IV	Frank-Kasper Spherical Phases in Block Copolymers
Tuesday	12:00 PM - 12:15 PM	Ya-xin Li	MC8: Complex Phases in Soft Matter IV	A case of antiferrochirality in a liquid crystal phase of counter- rotating staircases
Tuesday	12:15 PM - 12:30 PM	Asso. Prof. Ho-kei Chan	MC8: Complex Phases in Soft Matter IV	Confinement-induced columnar crystals: A route to new architecture in the scientific world
Tuesday	2:00 PM - 2:30 PM	Prof. Ron Lifshitz	MC8: Complex Phases in Soft Matter V	Thermodynamic stability of quasicrystals: From fluid dynamics to soft condensed matter
Tuesday	2:30 PM - 2:45 PM	Marouen Chemingui	MC8: Complex Phases in Soft Matter V	Influence of quantum dots on the optical properties of a room temperature cholesteric liquid crystal
Tuesday	2:45 PM - 3:00 PM	Georg Mehl	MC8: Complex Phases in Soft Matter V	Exploration of emerging chirality of chemically non-chiral systems in mixtures with LC nanoparticles
Tuesday	3:00 PM - 3:30 PM	Professor Slobodan Zumer	MC8: Complex Phases in Soft Matter V	Topological and optical solitons in frustrated chiral nematics
Tuesday	4:30 PM - 5:00 PM	Dr Jonathan Skelton	MC46: Structure, Dynamics and States in Matter under High Pressure VI	Temperature and pressure effects on phase stability from theoretical modelling: application to the tin-sulphide phase space
Tuesday	5:00 PM - 5:15 PM	Rui Vilarinho	MC46: Structure, Dynamics and States in Matter under High Pressure VI	High-pressure evolution of distortions in perovskites: A comparative RFeO3 vs RMnO3 study
Tuesday	5:15 PM - 5:30 PM	Samuel Gallego Parra	MC46: Structure, Dynamics and States in Matter under High Pressure VI	High-pressure synthesis of β- and α-In2Se3-like structures in Ga2S3
Tuesday	11:30 AM - 12:00 PM	Prof. Luca Salasnich	MC35: Collective Effects and Non-Equilibrium Phenomena in Quantum Gases and Superconductors IV	Unitary Fermi superfluid: Thermodynamics and Sound Modes from Elementary Excitations
Tuesday	12:00 PM - 12:15 PM	Hadrien Kurkjian	MC35: Collective Effects and Non-Equilibrium Phenomena in Quantum Gases and Superconductors IV	Collective modes as precusors of the phase transition in superfluid Fermi gases
Tuesday	12:15 PM - 12:30 PM	Dr. Serghei Klimin	MC35: Collective Effects and Non-Equilibrium Phenomena in Quantum Gases and Superconductors IV	Collective excitations of superfluid charged Fermi gases
Tuesday	2:00 PM - 2:30 PM	Ignacio A. Martinez	MC19: Advances in the Casimir Force and Heat Transfer Phenomena V	Laser heating for analyzing the energy dissipation due to Casimir-like interactions in colloidal systems within critical baths.
Tuesday	2:30 PM - 2:45 PM	Diego Fernández de la Pradilla Viso	MC19: Advances in the Casimir Force and Heat Transfer Phenomena V	Off-diagonal Casimir-Polder potentials in near-degenerate atomic systems
Tuesday	2:45 PM - 3:15 PM	Denis Basko	MC19: Advances in the Casimir Force and Heat Transfer Phenomena V	Signature of resonant modes in radiative heat current noise spectrum
Tuesday	3:15 PM - 3:30 PM	Kiryl Asheichyk	MC19: Advances in the Casimir Force and Heat Transfer Phenomena V	Radiative heat transfer with a cylindrical waveguide decays logarithmically slow
Tuesday	4:30 PM - 5:00 PM	Prof Raul Esquivel-Sirvent	MC19: Advances in the Casimir Force and Heat Transfer Phenomena VI	Aluminum plasmonics in Casimir-Lifshitz forces and Near-field radiative heat transfer.
Tuesday	5:00 PM - 5:30 PM	Dr. Falko Schmidt	MC19: Advances in the Casimir Force and Heat Transfer Phenomena VI	Tunable critical Casimir forces counteract Casimir–Lifshitz attraction
Tuesday	5:30 PM - 6:00 PM	Alonso Marquez Hernandez	MC19: Advances in the Casimir Force and Heat Transfer Phenomena VI	Near-field radiative heat transfer enhancement via external magnetic fields
Tuesday	11:30 AM - 12:00 PM	Prof. Alexander Grüneis	MC12: Physics in 2D Nanoarchitectonics IV	Origin of the Flat Band in Heavily Cs-Doped Graphene
Tuesday	12:00 PM - 12:15 PM	Christian Schönenberger	MC12: Physics in 2D Nanoarchitectonics IV	AC Josephson effect in higher-order topological insulator WTe2
Tuesday	12:15 PM - 12:30 PM	Dr. Aitor Garcia-ruiz	MC12: Physics in 2D Nanoarchitectonics IV	Weak ferroelectricity in few-layer graphenes
Tuesday	2:00 PM - 2:30 PM	Vladimir Falko	MC16: Spin Control in Twisted Van Der Waals Heterostructures V	Optically active self-organised quantum dots in marginally twisted MoSe2/WSe2 and MoS2/WS2 bilayers
Tuesday	2:30 PM - 2:45 PM	Marcel Reutzel	MC16: Spin Control in Twisted Van Der Waals Heterostructures V	Moiré interlayer excitons in space and time: time-resolved momentum microscopy on twisted WSe2/MoS2
Tuesday	2:45 PM - 3:15 PM	Dr. Dahlia Klein	MC16: Spin Control in Twisted Van Der Waals Heterostructures V	Electrical switching of a moiré ferroelectric superconductor
Tuesday	3:15 PM - 3:30 PM	Dr Elisa Castanon	MC16: Spin Control in Twisted Van Der Waals Heterostructures V	Interfacial ferroelectricity in marginally twisted 2D semiconductors studied via KPFM
Tuesday	4:30 PM - 5:00 PM	Yuan Cao	MC16: Spin Control in Twisted Van Der Waals Heterostructures VI	Superconductivity in Magic-angle Graphene Family

Tuesday	5:00 PM - 5:15 PM	David Perkins	MC16: Spin Control in Twisted Van Der Waals Heterostructures VI	Twist-Angle Control of Collinear Edelstein Effect in van der Waals Heterostructures
Tuesday	5:15 PM - 5:45 PM	Dr Alessandro Principi	MC16: Spin Control in Twisted Van Der Waals Heterostructures VI	Emergent Hyper-Magic Manifold in Twisted Kitaev Bilayers
Tuesday	11:30 AM - 12:00 PM	Prof. Dr. Mathias Weiler	MC45: Interfaces Between Magnonics and Phononics IV	Magneto-acoustic waves: Surface acoustic waves for magnonics
Tuesday	12:00 PM - 12:30 PM	Jarosław W. Kłos	MC45: Interfaces Between Magnonics and Phononics IV	Coupling between Surface Acoustic Waves and Spin Waves in Uniform or Patterned Magnetic Films
Tuesday	2:00 PM - 2:30 PM	Carl Davies	MC45: Interfaces Between Magnonics and Phononics V	Ultrafast magnetic switching using polarized phonons
Tuesday	2:30 PM - 2:45 PM	Yat-yin Au	MC45: Interfaces Between Magnonics and Phononics V	Resonant scattering of surface acoustic waves by magnetic stripe arrays
Tuesday	2:45 PM - 3:00 PM	Oliver Latcham	MC45: Interfaces Between Magnonics and Phononics V	Controlling Piezoelectric Love Waves in Magnetoacoustic Devices
Tuesday	3:00 PM - 3:30 PM	Andrew Rushforth	MC45: Interfaces Between Magnonics and Phononics V	Magnon – phonon coupling in magnetostrictive nanostructures
Tuesday	12:30 PM - 12:45 PM	Dr Max Mcginley	MC36: Integrating Quantum Computers in Condensed Matter Physics Simulations IV	Noise-resilient time crystals in quantum computers
Tuesday	11:30 AM - 12:00 PM	Dr. Vivien Kendon	MC36: Integrating Quantum Computers in Condensed Matter Physics Simulations IV	Quantum computing: prospects and challenges
Tuesday	12:00 PM - 12:30 PM	Dr. Jakob Kottmann	MC36: Integrating Quantum Computers in Condensed Matter Physics Simulations IV	Molecular Quantum Circuit Design
Tuesday	2:45 PM - 3:30 PM	Prof. Dr. Thomas O'Brien	MC36: Integrating Quantum Computers in Condensed Matter Physics Simulations V	Practical error mitigation by verification
Tuesday	2:45 PM - 3:30 PM	Prof. Emanuel Gull	MC36: Integrating Quantum Computers in Condensed Matter Physics Simulations V	The Hubbard model – Open Questions
Tuesday	3:30 PM - 3:45 PM	Kieran Bull	MC36: Integrating Quantum Computers in Condensed Matter Physics Simulations V	Time evolution on NISQ Hardware, a Matrix Product State Approach
Tuesday	4:30 PM - 5:00 PM	Dr Phalgun Lolur	MC36: Integrating Quantum Computers in Condensed Matter Physics Simulations VI	Quantum Computing for Chemistry and Materials Science: Outlook and Opportunities
Tuesday	4:30 PM - 4:45 PM	Abhishek Agarwal	MC36: Integrating Quantum Computers in Condensed Matter Physics Simulations VI	Quantum embedding approaches for materials simulations on quantum computers
Tuesday	4:45 PM - 6:00 PM	Panel Discussion	MC36: Integrating Quantum Computers in Condensed Matter Physics Simulations VI	Panel Discussion
Tuesday	2:00 PM - 2:30 PM	Professor Peter Wahl	MC50: Fermi Surface Topological Transitions - Effects of Interactions V	Magnetic-field control of the electronic structure of Sr3Ru2O7
Tuesday	2:30 PM - 3:00 PM	Professor James Annett	MC50: Fermi Surface Topological Transitions - Effects of Interactions V	Comparison of d-wave and p-wave pairing models in Sr2RuO4
Tuesday	3:00 PM - 3:15 PM	Carolina De Almeida Marques	MC50: Fermi Surface Topological Transitions - Effects of Interactions V	Imaging the field-induced changes in the electronic structure of metamagnetic Sr4Ru3O10
Tuesday	3:15 PM - 3:30 PM	Dr Anirudh Chandrasekaran	MC50: Fermi Surface Topological Transitions - Effects of Interactions V	Finding higher order Van Hove singularities in practice: a method for detailed multi-band models with applications to Sr_2RuO_4
Tuesday	11:30 AM - 12:00 PM	Prof. Dr. Adam Foster	MC48: Multi-modal Characterisation of Thin Film Optoelectronics for Energy Applications IV	Machine Learning in Scanning Probe Microscopy
Tuesday	12:00 PM - 12:15 PM	Hoyeon Choi	MC48: Multi-modal Characterisation of Thin Film Optoelectronics for Energy Applications IV	Impact of microstructure on crystallinity driven singlet fission efficiency in diF-TES-ADT
Tuesday	12:15 PM - 12:30 PM	Florian Gillissen	MC48: Multi-modal Characterisation of Thin Film Optoelectronics for Energy Applications IV	In-situ Electrochemistry Applied to Electrochromic Materials
Tuesday	2:00 PM - 2:30 PM	Prof Dr. Tracey Clarke	MC48: Multi-modal Characterisation of Thin Film Optoelectronics for Energy Applications V	Characterising Triplet States in Organic Photovoltaic Materials
Tuesday	2:30 PM - 2:45 PM	Robin Kerr	MC48: Multi-modal Characterisation of Thin Film Optoelectronics for Energy Applications V	Nanostructure and Evolution of Hydrated MAPbBr3(100) at Low Water Vapour Exposure
Tuesday	2:45 PM - 3:00 PM	Stephen Church	MC48: Multi-modal Characterisation of Thin Film Optoelectronics for Energy Applications V	Mobility, quantum efficiency and defect density from multi-modal spectroscopy of surface-guided strained CsPbBr3 microstructures
Tuesday	3:00 PM - 3:15 PM	Thomson Stuart	MC48: Multi-modal Characterisation of Thin Film Optoelectronics for Energy Applications V	Multi-modal Surface Imaging: Combining Raman, Photoluminescence and Photoluminescence Lifetime
Tuesday	3:15 PM - 3:30 PM	Pierre Couture	MC48: Multi-modal Characterisation of Thin Film Optoelectronics for Energy Applications V	"Total" Ion Beam analysis and 3D imaging of thin films using MeV ion beams technique: latest development at Surrey Ion Beam Centre to characterise material composition
Tuesday	4:15 PM - 4:45 PM	Prof. Dr. Sandrine Heutz	MC48: Multi-modal Characterisation of Thin Film Optoelectronics for Energy Applications VI	Molecular spins as a tool for multimodal characterisation and energy-saving technologies

Tuesday	4:45 PM - 5:00 PM	Dongkuk Kim	MC48: Multi-modal Characterisation of Thin Film Optoelectronics for Energy Applications VI	Multi-modal Characterisation of Thickness Dependent Small Molecule Thin Films for Effective Orientation Control
Tuesday	5:00 PM - 5:15 PM	Mr Harry Demetriou	MC48: Multi-modal Characterisation of Thin Film Optoelectronics for Energy Applications VI	Designing and Characterising Magnetic Superstructures in Vacuum Deposited Phthalocyanine Thin Films
Tuesday	5:15 PM - 5:45 PM	Dr. Stefania Moro	MC48: Multi-modal Characterisation of Thin Film Optoelectronics for Energy Applications VI	Characterising conjugated polymers by high-resolution STM imaging
Tuesday	11:30 AM - 12:15 PM	Dmitry Abanin	MC42: Broken Ergodicity and Localisation in Quantum Many-body Systems IV	Ergodicity, entanglement, and many-body localization
Tuesday	12:15 PM - 12:30 PM	Alex Nico-Katz	MC42: Broken Ergodicity and Localisation in Quantum Many-body Systems IV	Memory and Many-Body Localization: An Informational Approach
Tuesday	2:00 PM - 2:30 PM	Dr Achilleas Lazarides	MC42: Broken Ergodicity and Localisation in Quantum Many-body Systems V	Kinetic constraints vs chaos in classical many-body dynamics
Tuesday	2:30 PM - 3:00 PM	Dr Sthitadhi Roy	MC42: Broken Ergodicity and Localisation in Quantum Many-body Systems V	Anatomy of many-body localisation on the Fock space
Tuesday	3:00 PM - 3:15 PM	Dr. Sayak Ray	MC42: Broken Ergodicity and Localisation in Quantum Many-body Systems V	Classical route to ergodicity and scarring phenomena in two-component Bose-Josephson junction
Tuesday	4:15 PM - 4:45 PM	Maksym Serbyn	MC42: Broken Ergodicity and Localisation in Quantum Many-body Systems VI	A new form of ergodicity breaking from quantum many-body scars
Tuesday	4:45 PM - 5:00 PM	Jean-Yves Desaules	MC42: Broken Ergodicity and Localisation in Quantum Many-body Systems VI	Quantum many-body scars have extensive multipartite entanglement
Tuesday	5:00 PM - 5:30 PM	Dr Ana Hudomal	MC42: Broken Ergodicity and Localisation in Quantum Many-body Systems VI	Driving quantum many-body scars
Tuesday	11:30 AM - 12:30 PM	Sergej Flach	MC40: Strongly Disordered Insulators IV	Many Body Flat Band Localization
Tuesday	2:00 PM - 2:45 PM	Prof. Dragana Popovic	MC40: Strongly Disordered Insulators V	Quench dynamics in a disordered two-dimensional electron system: Long-range vs short-range Coulomb interactions
Tuesday	2:45 PM - 3:30 PM	Prof. Yuval Gefen	MC40: Strongly Disordered Insulators V	Measurements on a Localized Anderson
Tuesday	4:30 PM - 5:00 PM	Dr John Samson	MC40: Strongly Disordered Insulators VI	Final state bias in adiabatic quantum computing
Tuesday	5:00 PM - 5:30 PM	Thibault Charpentier	MC40: Strongly Disordered Insulators VI	First-order quantum breakdown of a bosonic disordered superconductor
Tuesday	5:30 PM - 6:00 PM	Roy Cohen	MC40: Strongly Disordered Insulators VI	The Pressure Driven Superconductor-Insulator-Transition in 2D Films
Tuesday	11:30 AM - 12:00 PM	Victor Mukherjee	MC20: Recent Advances in Quantum Thermodynamics with a Focus on Many-body Interactions IV	Universal features in finite-time quantum critical machines
Tuesday	12:00 PM - 12:15 PM	Krissia Zawadzki	MC20: Recent Advances in Quantum Thermodynamics with a Focus on Many-body Interactions IV	How accurate is Density Functional Theory to describe work extraction?
Tuesday	12:15 PM - 12:30 PM	Alberto Rolandi	MC20: Recent Advances in Quantum Thermodynamics with a Focus on Many-body Interactions IV	Finite-time Landauer principle at strong coupling
Tuesday	2:00 PM - 2:15 PM	Obinna Abah	MC20: Recent Advances in Quantum Thermodynamics with a Focus on Many-body Interactions V	Exploiting non-adiabatic excitations to enhance quantum battery
Tuesday	2:15 PM - 2:30 PM	Dario Poletti	MC20: Recent Advances in Quantum Thermodynamics with a Focus on Many-body Interactions V	Typicality of nonequilibrium (quasi-)steady currents
Tuesday	2:30 PM - 3:00 PM	Monika Aidelsburger	MC20: Recent Advances in Quantum Thermodynamics with a Focus on Many-body Interactions V	Quantum simulation with ultracold atoms – emergent Hilbert-space fragmentation
Tuesday	4:00 PM - 4:30 PM	Prof John Goold	MC20: Recent Advances in Quantum Thermodynamics with a Focus on Many-body Interactions VI	Taking the temperature of a pure quantum state
Tuesday	4:30 PM - 4:45 PM	Karen Hovhannisyan	MC20: Recent Advances in Quantum Thermodynamics with a Focus on Many-body Interactions VI	Thermometric protocol for ultraprecise thermometry in many-body systems at low temperatures
Tuesday	4:45 PM - 5:00 PM	Jonas Glatthard	MC20: Recent Advances in Quantum Thermodynamics with a Focus on Many-body Interactions VI	Optimal cold atom thermometry using adaptive Bayesian strategies
Tuesday	5:00 PM - 5:15 PM	Adam Burgess	MC20: Recent Advances in Quantum Thermodynamics with a Focus on Many-body Interactions VI	Non-Markovian Dynamics of Decoherence in Bio-molecular Chromophores
Tuesday	5:15 PM - 5:30 PM	Parvinder	MC20: Recent Advances in Quantum Thermodynamics with a Focus on Many-body Interactions VI	Seeding Crystallization in Time
Tuesday	5:30 PM - 6:00 PM	Abolfazl Bayat	MC20: Recent Advances in Quantum Thermodynamics with a Focus on Many-body Interactions VI	Global Sensing and Its Impact for Quantum Many-Body Probes
Tuesday	11:30 AM - 12:00 PM	Prof. Francisco Javier Manjón	MC46: Structure, Dynamics and States in Matter Under High Pressure IV	Layered topological semimetal GaGeTe and its high-pressure behaviour

Tuesday	12:00 PM - 12:30 PM	Mr Roberto Gunnella	MC46: Structure, Dynamics and States in Matter Under High Pressure IV	Porous silicon nanowires phase transformations at high temperatures and pressures
Tuesday	2:00 PM - 2:30 PM	Prof. Dr. Peter Steeneken	MC17: Nanomechanical and Electromechanical Systems V	Probing the physics of 2D materials by nanomechanical resonance
Tuesday	2:30 PM - 3:00 PM	Mehmet Selim Hanay	MC17: Nanomechanical and Electromechanical Systems V	Self-focusing nanomechanical sensors for atmospheric pressure mass spectrometry of single viruses and nanoparticles
Tuesday	3:00 PM - 3:15 PM	Menno Poot	MC17: Nanomechanical and Electromechanical Systems V	Geometric tuning of stress in pre-displaced silicon nitride beam resonators
Tuesday	4:30 PM - 4:45 PM	Matthijs De Jong	MC17: Nanomechanical and Electromechanical Systems VI	Mechanical overtone frequency combs
Tuesday	4:45 PM - 5:00 PM	Dr. Mengqi Fu	MC17: Nanomechanical and Electromechanical Systems VI	Sideband effects and tunable frequency comb in nonlinear mechanical membrane resonators
Tuesday	5:00 PM - 5:15 PM	Daniel Boneß	MC17: Nanomechanical and Electromechanical Systems VI	Frequency comb from nonlinear damping in nanomechanical resonators
Tuesday	11:30 AM - 12:00 PM	Prof. Dr. Michael Gottfried	MC52: Heterostructures, Combining Organic Molecules and 2D Materials IV	Fluoroarenes in On-Surface Synthesis and Organic/TMDC Hybrid Interfaces
Tuesday	12:00 PM - 12:15 PM	Maximilian Dreher	MC52: Heterostructures, Combining Organic Molecules and 2D Materials IV	Van der Waals Heteroepitaxy: Intrinsic Epitaxial Alignment of Perfluoropentacene Films on Transition Metal Dichalcogenides
Tuesday	12:15 PM - 12:30 PM	Dr Juliana Morbec	MC52: Heterostructures, Combining Organic Molecules and 2D Materials IV	Organic molecules meet transition metal dichalcogenides for solar energy conversion
Tuesday	2:00 PM - 2:30 PM	Dr James Lloyd-Hughes	MC52: Heterostructures, Combining Organic Molecules and 2D Materials V	Heteronanotubes with strong intertube excitonic coupling
Tuesday	2:30 PM - 2:45 PM	Edward Dunn	MC52: Heterostructures, Combining Organic Molecules and 2D Materials V	Correlating the electronic and chemical structure of defects in TMDs with atomic resolution conductive microscopy
Tuesday	2:45 PM - 3:00 PM	Ms Arpita Mukherjee	MC52: Heterostructures, Combining Organic Molecules and 2D Materials V	A First Principle study on structural, electronic and magnetic properties of tetragonal/hexagonal-VSe2(001)/Co heterostructure
Tuesday	3:00 PM - 3:15 PM	Abdolvahab Seif	MC52: Heterostructures, Combining Organic Molecules and 2D Materials V	Structural and electronic properties of vdW-2D materials combined with organic functional groups by first principles
Tuesday	3:15 PM - 3:30 PM	Mr. Peter Kratzer	MC52: Heterostructures, Combining Organic Molecules and 2D Materials V	Vibrational and optical properties of a non-ideal MoSSe Janus monolayer from first-principles calculations
Tuesday	4:30 PM - 5:00 PM	Dr Joshua Thompson	MC52: Heterostructures, Combining Organic Molecules and 2D Materials VI	Interlayer exciton landscape in WS2/tetracene heterostructures
Tuesday	5:00 PM - 5:15 PM	Habib Rostami	MC52: Heterostructures, Combining Organic Molecules and 2D Materials VI	Giant Shear Displacement by Light-Induced Raman Force in Bilayer Graphene
Tuesday	5:15 PM - 5:30 PM	David Carey	MC52: Heterostructures, Combining Organic Molecules and 2D Materials VI	Organic molecular doping of single and bilayer graphene: Band engineering and THz Physics
Tuesday	5:30 PM - 5:45 PM	Dr. Nilanthy Balakrishnan	MC52: Heterostructures, Combining Organic Molecules and 2D Materials VI	Indium Selenide based van der Waals heterostructures for emerging technologies

Wednesday 24 August 2022				
Day	**Time**	**Name**	**Session**	**Abstract Title**
Wednesday	9:00 AM - 10:00 AM	Professor Daan Frenkel	Plenary Speaker	How entropy helps viruses ... and may help us
Wednesday	10:00 AM - 11:00 AM	Professor Gábor Csányi	Semi-plenary Speaker	The end of ab initio MD
Wednesday	10:00 AM - 11:00 AM	Professor Jessica Wade	Semi-plenary: Speaker	Chiral functional materials as a platform for emerging electronics
Wednesday	11:30 AM - 12:30 PM	Europhysics Prize	Europhysics Prize	Multiferroics, past, present and future
Wednesday	2:00 PM - 2:30 PM	Dr. Eric O'Quinn	MC38: Controlled irradiation Disorder in Model Systems: Organisation, Dynamics, and Transformations VII	Far-From-Equilibrium Processing of Materials under Extreme Conditions
Wednesday	2:30 PM - 3:00 PM	Dr Paul Fossati	MC38: Controlled irradiation Disorder in Model Systems: Organisation, Dynamics, and Transformations VII	Defects and superionic transition in UO2
Wednesday	3:00 PM - 3:30 PM	Blas Uberuaga	MC38: Controlled irradiation Disorder in Model Systems: Organisation, Dynamics, and Transformations VII	Assessing, Predicting, and Validating Metastable Phase Formation via Irradiation
Wednesday	4:30 PM - 5:00 PM	Dr. Steven Conradson	MC38: Controlled irradiation Disorder in Model Systems: Organisation, Dynamics, and Transformations VIII	Superconductivity-Lattice Coupling in Maximally Overdoped Cuprates: The Structure of [p=1/Tc=92 K] YBa2Cu3O8 Prepared with High Pressure Oxygen
Wednesday	5:00 PM - 5:30 PM	Dominik Kraus	MC38: Controlled irradiation Disorder in Model Systems: Organisation, Dynamics, and Transformations VIII	Exploiting the chemistry of liquid metallic hydrogen in mixtures with other elements
Wednesday	5:30 PM - 5:45 PM	Igor Gussev	MC38: Controlled irradiation Disorder in Model Systems: Organisation, Dynamics, and Transformations VIII	Exploring fundamental aspects of the structural organization in weberite-type tantalate oxides
Wednesday	5:45 PM - 6:00 PM	Mr Bryce Mullens	MC38: Controlled irradiation Disorder in Model Systems: Organisation, Dynamics, and Transformations VIII	Disordering Mechanisms in ABO4 Metal Oxides
Wednesday	2:00 PM - 2:30 PM	Jonathan Prance	MC24: Quantum Electronics at Ultra-low Temperatures VII	Cooling nano-electronic devices to ultra-low temperatures
Wednesday	2:30 PM - 2:45 PM	Omid Sharifi Sedeh	MC24: Quantum Electronics at Ultra-low Temperatures VII	Coulomb blockade thermometry: a master equation, and Monte Carlo approach
Wednesday	2:45 PM - 3:00 PM	Bernd Braunecker	MC24: Quantum Electronics at Ultra-low Temperatures VII	Quantum fluctuation based cooling mechanism at low temperatures
Wednesday	3:00 PM - 3:15 PM	Roger Mitchell	MC24: Quantum Electronics at Ultra-low Temperatures VII	2.6 Tesla Cryogen Free Mu3e system
Wednesday	4:15 PM - 4:45 PM	Dr Oindrila Deb	MC21: Bound states in hybrid superconductor nanostructures VIII	Hunting Majorana Bound States in Topological Systems
Wednesday	4:45 PM - 5:00 PM	Fernando Peñaranda	MC21: Bound states in hybrid superconductor nanostructures VIII	Majorana bound states in encapsulated bilayer graphene
Wednesday	5:00 PM - 5:15 PM	Mr Julien Barrier	MC21: Bound states in hybrid superconductor nanostructures VIII	Topological superconductivity in proximitised bilayer graphene
Wednesday	5:15 PM - 5:30 PM	Dr. Paritosh Karnatak	MC21: Bound states in hybrid superconductor nanostructures VIII	Bound states in normal-insulator-superconductor van der Waals heterostructures
Wednesday	5:30 PM - 5:45 PM	Miguel Alvarado	MC21: Bound states in hybrid superconductor nanostructures VIII	Topologically driven phi0-Josephson junctions in TBG
Wednesday	5:45 PM - 6:00 PM	Guanzhong Wang	MC21: Bound states in hybrid superconductor nanostructures VIII	Realizing a minimal Kitaev chain in coupled quantum dots
Wednesday	2:00 PM - 2:30 PM	Prof Gerd Schroeder-Turk	MC8 : Complex Phases in Soft Matter VII	Hypothetical complex multi-domain network geometries with chirality: optical properties and geometric free energy estimates
Wednesday	2:30 PM - 2:45 PM	Dr Yu Cao	MC8 : Complex Phases in Soft Matter VII	Global/Local Chirality Characterization with Resonant X-ray Scattering
Wednesday	2:45 PM - 3:00 PM	Dr. Ningdong Huang	MC8 : Complex Phases in Soft Matter VII	Crystalline order in lyotropic solution of supramolecular hollow nanotubes
Wednesday	3:00 PM - 3:15 PM	Yang-yang Zhao	MC8 : Complex Phases in Soft Matter VII	Self-assembly of gold nanoparticles into an adjustable plasmonic 3D lattice using twin and Janus-type forked ligands
Wednesday	3:15 PM - 3:30 PM	Brigitte PANSU	MC8 : Complex Phases in Soft Matter VII	Gold nanoparticule supracrystals : structure and stiffness
Wednesday	4:30 PM - 4:45 PM	Dr Gleb Yakubov	MC2: Self-Organisation in Living Systems VIII	Probing Mechanics of Plant Cells Using Atomic Force Microscopy
Wednesday	4:45 PM - 5:00 PM	James Hague	MC2: Self-Organisation in Living Systems VIII	Self-organization in polarised tissues due to feedback between cell- and macroscopic-scale forces
Wednesday	5:00 PM - 5:15 PM	Domagoj Božan	MC2: Self-Organisation in Living Systems VIII	Coordinated poleward flux of sister kinetochore fibers drives chromosome congression and alignment
Wednesday	5:15 PM - 5:30 PM	Ivana Ban	MC2: Self-Organisation in Living Systems VIII	Proliferative advantage of specific aneuploid cells drives evolution of tumor karyotypes
Wednesday	2:00 PM - 2:30 PM	Dr Fabio Pistolesi	MC17: Nanomechanical and Electromechanical Systems VII	Proposal for a nanomechanical qubit
Wednesday	2:30 PM - 3:00 PM	Yaroslav Blanter	MC17: Nanomechanical and Electromechanical Systems VII	Quantum state preparation in mechanical resonators
Wednesday	3:00 PM - 3:15 PM	Ilya Golokolenov	MC17: Nanomechanical and Electromechanical Systems VII	Stochastic thermodynamics of a single nano-mechanical mode
Wednesday	4:30 PM - 5:00 PM	Javier Del Pino	MC17: Nanomechanical and Electromechanical Systems VIII	From chiral squeezing to nonlinear topology in optomechanics
Wednesday	5:00 PM - 5:15 PM	Andrea Cupertino	MC17: Nanomechanical and Electromechanical Systems VIII	Spider-web nanomechanical resonators by Bayesian optimization with ultralow dissipation
Wednesday	5:15 PM - 5:30 PM	Dr. James Millen	MC17: Nanomechanical and Electromechanical Systems VIII	Levitated Electromechanics
Wednesday	2:00 PM - 2:30 PM	Matthieu Delbecq	MC14: Beyond Charge Transport in Nanostructures and 2D Materials via Geometric Design VII	Synthetic spin-orbit interaction in low dimensional conductors

Wednesday	2:30 PM - 2:45 PM	Dr Andrey Shytov	MC14: Beyond Charge Transport in Nanostructures and 2D Materials via Geometric Design VII	Onset of charge fluidity in two dimensions
Wednesday	2:45 PM - 3:00 PM	Tancredi Salamone	MC14: Beyond Charge Transport in Nanostructures and 2D Materials via Geometric Design VII	Curvature control of the superconducting proximity effect in diffusive SFS Josephson junctions and ferromagnetic nanowires
Wednesday	3:00 PM - 3:15 PM	Dr Christopher Anderson	MC14: Beyond Charge Transport in Nanostructures and 2D Materials via Geometric Design VII	Electrical Bandgap Tuning and Spin Transport in Fully Encapsulated Bilayer Graphene Devices: Steps Towards 2D Spin Logic
Wednesday	3:15 PM - 3:30 PM	Mr Daniel Burrow	MC14: Beyond Charge Transport in Nanostructures and 2D Materials via Geometric Design VII	Investigating ballistic charge transport and spin injection via 1D graphene/FM junctions
Wednesday	4:30 PM - 5:00 PM	Sol Jacobsen	MC14: Beyond Charge Transport in Nanostructures and 2D Materials via Geometric Design VIII	Superconducting Spintronics in Curved Geometries
Wednesday	5:00 PM - 5:15 PM	Eusebio J. Rodríguez	MC14: Beyond Charge Transport in Nanostructures and 2D Materials via Geometric Design VIII	Nonmonotonic quantum phase gathering in curved spintronic circuits
Wednesday	5:15 PM - 5:30 PM	Samuel Haskell	MC14: Beyond Charge Transport in Nanostructures and 2D Materials via Geometric Design VIII	Emergent Hyper-Magic Manifold in Twisted Kitaev Bilayers
Wednesday	5:30 PM - 6:00 PM	Dr. Peter Makk	MC14: Beyond Charge Transport in Nanostructures and 2D Materials via Geometric Design VIII	Engineering the band structure of van der Waals materials by pressure and strain
Wednesday	2:00 PM - 2:30 PM	Carlos Sa De Melo	MC35: Collective Effects and Non-Equilibrium Phenomena in Quantum Gases and Superconductors VII	Density induced BCS-Bose evolution in gated two-dimensional superconductors: The role of the interaction range in the Berezinskii-Kosterlitz-Thouless transition
Wednesday	2:30 PM - 2:45 PM	Dr I-Kang (Gary) Liu	MC35: Collective Effects and Non-Equilibrium Phenomena in Quantum Gases and Superconductors VII	Quasi-particle excitations and nonlinear dynamics in an attractive Bose-Bose mixture
Wednesday	2:45 PM - 3:00 PM	Mr. Matthew Houtput	MC35: Collective Effects and Non-Equilibrium Phenomena in Quantum Gases and Superconductors VII	Beyond the Fröhlich Hamiltonian: Large polarons in anharmonic solids
Wednesday	3:00 PM - 3:15 PM	Thomas Repplinger	MC35: Collective Effects and Non-Equilibrium Phenomena in Quantum Gases and Superconductors VII	Dispersion of plasmons in 3D BCS Superconductors
Wednesday	3:15 PM - 3:30 PM	Timour Ichmoukhamedov	MC35: Collective Effects and Non-Equilibrium Phenomena in Quantum Gases and Superconductors VII	Improving Feynman's variational path-integral approach: An application to the BEC-impurity problem.
Wednesday	4:30 PM - 5:00 PM	Silvia Musolino	MC35: Collective Effects and Non-Equilibrium Phenomena in Quantum Gases and Superconductors VIII	Bose-Einstein condensation of Efimovian triples in the unitary Bose gas
Wednesday	5:00 PM - 5:30 PM	Dr. Hiromitsu Takeuchi	MC35: Collective Effects and Non-Equilibrium Phenomena in Quantum Gases and Superconductors VIII	Nematic superfluidity of spinor Bose-Einstein condensates
Wednesday	5:30 PM - 5:45 PM	James Hague	MC35: Collective Effects and Non-Equilibrium Phenomena in Quantum Gases and Superconductors VIII	Light bipolarons and other pairing in UV models of BCC and FCC lattices
Wednesday	2:00 PM - 2:15 PM	Opening Remarks	MC10: Nanodevice Iontronics VII	Opening Remarks
Wednesday	2:15 PM - 2:45 PM	Fabio Cicoira	MC10: Nanodevice Iontronics VII	Flexible, stretchable and healable bioelectronics
Wednesday	2:45 PM - 3:15 PM	Claudio Fontanesi	MC10: Nanodevice Iontronics VII	“Chiralized” Cu and Ni deposits obtained via Electroless deposition.
Wednesday	3:15 PM - 3:30 PM	Valeria Demontis	MC10: Nanodevice Iontronics VII	Ion-gating of individually contacted quasi 1-D metal-oxide semiconductor core-shell heterojunctions
Wednesday	4:30 PM - 5:15 PM	Dr. Shimpei Ono	MC10: Nanodevice Iontronics VIII	New iontronics devices using electric double layer electrets
Wednesday	5:15 PM - 5:30 PM	Alessia Colosimo	MC10: Nanodevice Iontronics VIII	A Heat Driven Iontronic Nanotransistor
Wednesday	5:30 PM - 5:45 PM	Matteo Sensi	MC10: Nanodevice Iontronics VIII	Electrolyte-Gated Transistors Biosensors for Healthcare Applications
Wednesday	2:00 PM - 2:30 PM	John Chalker	MC42: Broken Ergodicity and Localisation in Quantum Many-body Systems VII	Many-body delocalisation as symmetry breaking
Wednesday	2:30 PM - 3:00 PM	Dr Antonio Strkalj	MC42: Broken Ergodicity and Localisation in Quantum Many-body Systems VII	Coexistence of localization and transport in many-body two-dimensional Aubry-André models
Wednesday	3:00 PM - 3:15 PM	Songyang Pu	MC42: Broken Ergodicity and Localisation in Quantum Many-body Systems VII	Anderson Localization in the Fractional Quantum Hall Effect
Wednesday	4:30 PM - 5:00 PM	Fabien Alet	MC42: Broken Ergodicity and Localisation in Quantum Many-body Systems VIII	Searching for Many-Body Localization in constrained models and in systems with extended symmetries
Wednesday	5:00 PM - 5:15 PM	Mr Aiden Daniel	MC42: Broken Ergodicity and Localisation in Quantum Many-body Systems VIII	Study of Experimental Regimes for the Observation of Quantum Many-Body Mixed phase space
Wednesday	5:15 PM - 5:45 PM	Yevgeny Bar Lev	MC42: Broken Ergodicity and Localisation in Quantum Many-body Systems VIII	Stark Discrete Time Crystal
Wednesday	2:00 PM - 2:45 PM	Professor Igor Lerner	MC40: Strongly Disordered Insulators VII	Electron-phonon decoupling in two dimensions
Wednesday	2:45 PM - 3:30 PM	Louk Rademaker	MC40: Strongly Disordered Insulators VII	Scaling Theory of Few-Particle Delocalization

Wednesday	4:30 PM - 5:00 PM	Adam Lowe	MC40: Strongly Disordered Insulators VIII	Disorder-enhanced superconductivity in a quasi-one-dimensional strongly correlated system
Wednesday	5:00 PM - 5:30 PM	Julien Delahaye	MC40: Strongly Disordered Insulators VIII	Electrical glassy effects in disordered insulators: current experimental situation
Wednesday	2:00 PM - 2:15 PM	Opening Remarks	MC7: Exploring Liquid Properties in Confined Geometry (Up To Mesoscopic Scales) VII	Opening Remarks
Wednesday	2:15 PM - 2:45 PM	Patrick Huber	MC7: Exploring Liquid Properties in Confined Geometry (Up To Mesoscopic Scales) VII	Water confined in nanopores: What do we know about it and what is it good for?
Wednesday	2:45 PM - 3:00 PM	Thierry Ondarçuhu	MC7: Exploring Liquid Properties in Confined Geometry (Up To Mesoscopic Scales) VII	Wetting at the nanoscale: molecular desorption induced by a moving contact line
Wednesday	3:00 PM - 3:15 PM	Ross Stewart	MC7: Exploring Liquid Properties in Confined Geometry (Up To Mesoscopic Scales) VII	New opportunities for liquid neutron spectroscopy at ISIS
Wednesday	3:15 PM - 3:30 PM	Dr Dhanadeep Dutta	MC7: Exploring Liquid Properties in Confined Geometry (Up To Mesoscopic Scales) VII	Water in nano-confinement
Wednesday	4:30 PM - 5:00 PM	Denis Bartolo	MC7: Exploring liquid properties in confined geometry (up to mesoscopic scales) VIII	Flocking fluids
Wednesday	5:00 PM - 5:15 PM	Dr Fausto Martelli	MC7: Exploring liquid properties in confined geometry (up to mesoscopic scales) VIII	Water under soft and hard confinement
Wednesday	5:15 PM - 5:30 PM	Amirreza Gholivand	MC7: Exploring liquid properties in confined geometry (up to mesoscopic scales) VIII	Blood memory effect in 3D microconfined structure
Wednesday	5:30 PM - 5:45 PM	Laura Gallardo	MC7: Exploring liquid properties in confined geometry (up to mesoscopic scales) VIII	Switchable Wetting Properties in Polypyrrol-Porous Silicon Systems
Wednesday	5:45 PM - 6:00 PM	Mr Sri Ganesh Subramanian	MC7: Exploring liquid properties in confined geometry (up to mesoscopic scales) VIII	Self-Propulsion, Evaporation, and Encapsulation Dynamics of an Aqueous Micro-drop over a Deformable Viscoelastic Liquid Film
Wednesday	2:00 PM - 2:30 PM	Titus Neupert	MC50: Fermi Surface Topological Transitions - Effects of Interactions VII	Unconventional charge order and superconductivity in kagome materials
Wednesday	2:30 PM - 3:00 PM	Dr. Alexandre Pourret	MC50: Fermi Surface Topological Transitions - Effects of Interactions VII	Successive Electronic Topological Transitions in the Antiferromagnet UPd2Al3
Wednesday	3:00 PM - 3:15 PM	Dr Andreas W Rost	MC50: Fermi Surface Topological Transitions - Effects of Interactions VII	Towards the multicritical Lifshitz point in Sr3Ru2O7
Wednesday	3:15 PM - 3:30 PM	Edgar Abarca Morales	MC50: Fermi Surface Topological Transitions - Effects of Interactions VII	Uniaxial strain-tuning of the surface electronic structure of Sr2RuO4
Wednesday	4:30 PM - 4:45 PM	Marcin Mucha-Kruczynski	MC50: Fermi Surface Topological Transitions - Effects of Interactions VIII	Lifshitz transition-induced tuning of charge density waves in 2H-TaSe2
Wednesday	4:45 PM - 5:00 PM	Dr Krzysztof Wójcik	MC50: Fermi Surface Topological Transitions - Effects of Interactions VIII	Interplay of Kondo, RKKY and frustrations: 2-impurity spin liquid and lattice perspective
Wednesday	5:00 PM - 5:15 PM	Dr Sergey Slizovskiy	MC50: Fermi Surface Topological Transitions - Effects of Interactions VIII	Aharonov-Bohm oscillations on a kagomé network of Lifshitz transition trajectories as a precursor of Brown-Zak fermions in graphene superlattices.

Thursday 25 August 2022				
Day	**Time**	**Name**	**Session**	**Abstract Title**
Thursday	10:00 AM - 11:00 AM	Prof. Qihua Xiong	Semi-plenary Speaker	Manipulating Exciton Polariton Condensates at Room Temperature
Thursday	10:00 AM - 11:00 AM	Professor Chris Vale	Semi-plenary Speaker	Dynamics in Fermi gases quenched to unitarity
Thursday	10:00 AM - 11:00 AM	Professor Miha Ravnik	Semi-plenary Speaker	Passive and active topological soft matter
Thursday	11:30 AM - 12:00 PM	Nadège Ollier	MC38: Controlled irradiation Disorder in Model Systems: Organisation, Dynamics, and Transformations IX	Thermal and electron induced relaxation of densified silica phases
Thursday	12:00 PM - 12:30 PM	Pierfrancesco Urbani	MC38: Controlled irradiation Disorder in Model Systems: Organisation, Dynamics, and Transformations IX	Theory of glasses in infinite dimensions
Thursday	2:00 PM - 2:30 PM	Prof. Flyura Djurabekova	MC38: Controlled Irradiation Disorder in Model Systems, Organisation, Dynamics, and Transformations X	Mechanisms of interactions of swift heavy ions with embedded metal nanoparticles
Thursday	2:30 PM - 3:00 PM	Dr. Nikita Medvedev	MC38: Controlled Irradiation Disorder in Model Systems, Organisation, Dynamics, and Transformations X	Modeling swift heavy ion track formation: how electrons heat the lattice
Thursday	3:00 PM - 3:30 PM	Dr. Jacques O'Connell	MC38: Controlled Irradiation Disorder in Model Systems, Organisation, Dynamics, and Transformations X	Towards a holistic model of SHI induced structural modification - Beyond the thermal spike
Thursday	4:30 PM - 4:45 PM	Prof Michael Lee	MC38: Controlled Irradiation Disorder in Model Systems: Organisation, Dynamics, and Transformations XI	Room temperature stability and phase transformation of Shi induced tetragonal tracks in monoclinic zirconia
Thursday	4:45 PM - 5:00 PM	Dr Daniel Chaney	MC38: Controlled Irradiation Disorder in Model Systems: Organisation, Dynamics, and Transformations XI	Tuneable Correlated Disorder and Disorder-Phonon Coupling in the Pseudo-bcc Uranium Molybdenum System γ-(U1-xMox)
Thursday	5:00 PM - 5:15 PM	Miss Aine Black	MC38: Controlled Irradiation Disorder in Model Systems: Organisation, Dynamics, and Transformations XI	The Effect of Lithium Concentration on the Radiation Damage in UK Nuclear Waste Glasses
Thursday	5:15 PM - 5:30 PM	Henry Charlton	MC38: Controlled Irradiation Disorder in Model Systems: Organisation, Dynamics, and Transformations XI	Oxygen sublattice organization in the pseudo-binary system Nd2O3-CeO2
Thursday	5:30 PM - 5:45 PM	Dr Gianguido Baldinozzi	MC38: Controlled Irradiation Disorder in Model Systems: Organisation, Dynamics, and Transformations XI	Radiation effects in fluorite-related oxide structures with aliovalent substitutions.
Thursday	5:45 PM - 6:00 PM	Dr. Maulik Patel	MC38: Controlled Irradiation Disorder in Model Systems: Organisation, Dynamics, and Transformations XI	Radiation effects in Gd2Ce2O7: role of anion sublattice in disordering and limitations of Gibbons model for damage evolution in disordered systems.
Thursday	11:30 AM - 12:00 PM	Thilo Bauch	MC21: Bound States in Hybrid Superconductor Nanostructures IX	DC and microwave transport properties of topological insulator nanoribbon-superconductor hybrid junctions
Thursday	12:00 PM - 12:15 PM	Pankaj Mandal	MC21: Bound States in Hybrid Superconductor Nanostructures IX	Finite field transport response of a dilute magnetic topological insulator based hybrid Josephson junction
Thursday	12:15 PM - 12:30 PM	Leyla Majidi	MC21: Bound States in Hybrid Superconductor Nanostructures IX	Electrical and thermal transport in twisted TMDC/CrI$_3$-superconducting TMDC junctions
Thursday	2:00 PM - 2:30 PM	Professor José María De Teresa	MC22: Nanoscale Fabrication of Superconducting Devices and Their Applications X	Superconducting devices grown by Focused Ion Beam Induced Deposition (FIBID)
Thursday	2:30 PM - 2:45 PM	Timur Griner	MC22: Nanoscale Fabrication of Superconducting Devices and Their Applications X	Nb and NbN constriction Josephson junctions and nanoSQUIDs patterned by He and Ne focused ion beams
Thursday	2:45 PM - 3:00 PM	Vladimir Vladimir Antonov	MC22: Nanoscale Fabrication of Superconducting Devices and Their Applications X	Observation of the inverse Shapiro steps in nanoscale superconducting wires
Thursday	3:00 PM - 3:30 PM	Prof. Beena Kalisky	MC22: Nanoscale Fabrication of Superconducting Devices and Their Applications X	Imaging quantum materials with scanning SQUID microscopy
Thursday	5:15 PM - 5:30 PM	Dr. Kaveh Lahabi	MC22: Nanoscale Fabrication of Superconducting Devices and their Applications XI	Direct-write nanofabrication of novel SQUIDs for quantum sensing
Thursday	5:00 PM - 5:15 PM	Daniel Jetter	MC22: Nanoscale Fabrication of Superconducting Devices and their Applications XI	Magnetic, thermal, and topographic imaging with a nanometer-scale SQUID-on-lever scanning probe
Thursday	5:30 PM - 6:00 PM	Professor Shane Cybart	MC22: Nanoscale Fabrication of Superconducting Devices and their Applications XI	High Temperature Superconductor Materials Modification with Focused Helium Ions for Nano Josephson Devices
Thursday	4:30 PM - 5:00 PM	Sebastian de Graaf	MC22: Nanoscale Fabrication of Superconducting Devices and their Applications XI	Bespoke superconducting resonators as probes of materials and decoherence in quantum circuits
Thursday	11:30 AM - 12:00 PM	Carl-Philipp Heisenberg	MC3: Tissue Dynamics: From in Vivo Experiments to in Silico Modelling IX	The role of interstitial fluid accumulation and relocalization for embryonic axis formation in zebrafish
Thursday	12:00 PM - 12:15 PM	Nicolas Cuny	MC3: Tissue Dynamics: From in Vivo Experiments to in Silico Modelling IX	Using an active patterned shell model to understand the mechanics of sea urchin gastrulation
Thursday	12:15 PM - 12:30 PM	Mr Simone Cicolini	MC3: Tissue Dynamics: From in Vivo Experiments to in Silico Modelling IX	Pattern formation and morphogenesis: veins formation in the Drosophila wing

Thursday	2:00 PM - 2:30 PM	Lisa Manning	MC3: Tissue Dynamics: From In Vivo Experiments to In Silico Modelling X	Collective mechanisms for cell motility in monolayers and stratified epithelia
Thursday	2:30 PM - 2:45 PM	Andrew Killeen	MC3: Tissue Dynamics: From In Vivo Experiments to In Silico Modelling X	Polar Fluctuations Lead to Extensile Nematic Behaviour in Confluent Tissues
Thursday	2:45 PM - 3:00 PM	Fernanda Perez-Verdugo	MC3: Tissue Dynamics: From In Vivo Experiments to In Silico Modelling X	Vertex model characterization of active contraction pulses in epithelial cells
Thursday	3:00 PM - 3:15 PM	Dr Elsen Tjhung	MC3: Tissue Dynamics: From In Vivo Experiments to In Silico Modelling X	Is the tendency for all living systems to do work universal?
Thursday	3:15 PM - 3:30 PM	Dong Wang	MC3: Tissue Dynamics: From In Vivo Experiments to In Silico Modelling X	The structural, vibrational and mechanical properties in jammed packings of deformable particles
Thursday	4:30 PM - 5:00 PM	Aurélien Roux	MC3: Tissue Dynamics, From in Vivo Experiments to in Silico Modelling XI	In vitro morphogenesis of cellular tornadoes
Thursday	5:00 PM - 5:15 PM	Majid Layachi	MC3: Tissue Dynamics, From in Vivo Experiments to in Silico Modelling XI	Microfluidic flow of vesicle prototissues as a model for cellular tissues
Thursday	5:15 PM - 5:30 PM	Myriam Reffay	MC3: Tissue Dynamics, From in Vivo Experiments to in Silico Modelling XI	Stretching magnetic cells: from myoblasts to muscle differentiation
Thursday	5:30 PM - 5:45 PM	Jean-Paul Rieu	MC3: Tissue Dynamics, From in Vivo Experiments to in Silico Modelling XI	Oxygen driven spreading and microphase separation of eukaryotic cells
Thursday	5:45 PM - 6:00 PM	Manon Valet	MC3: Tissue Dynamics, From in Vivo Experiments to in Silico Modelling XI	Synthetic morphogenesis driven by conditional gene activation in a human pluripotent embryonic stem cell population
Thursday	11:30 AM - 12:00 PM	Cosimo Gorini	MC14: Beyond Charge Transport in Nanostructures and 2D Materials via Geometric Design IX	Magnetotransport in 3D topological insulator nanowires
Thursday	12:00 PM - 12:15 PM	Yuriko Baba	MC14: Beyond Charge Transport in Nanostructures and 2D Materials via Geometric Design IX	Effect of the electric field in High Chern number magnetic Topological insulators
Thursday	12:15 PM - 12:45 PM	Roberta Citro	MC14: Beyond Charge Transport in Nanostructures and 2D Materials via Geometric Design IX	Gate tunable anomalous Hall effect as a probe of Berry curvature in oxide interfaces
Thursday	2:00 PM - 2:30 PM	Laure Mercier De Lépinay	MC17: Nanomechanical and Electromechanical Systems X	Optomechanical nonreciprocal stabilization
Thursday	2:30 PM - 3:00 PM	Pierre Verlot	MC17: Nanomechanical and Electromechanical Systems X	Quantum optomechanics at room temperature: A nanomechanical endeavour?
Thursday	3:00 PM - 3:15 PM	Dr. Francesco Fogliano	MC17: Nanomechanical and Electromechanical Systems X	A tunable fiber Fabry-Perot cavity for hybrid optomechanics stabilized at 4K
Thursday	3:15 PM - 3:30 PM	Dr. Xin Zhou	MC17: Nanomechanical and Electromechanical Systems X	Silicon nitride drum resonator for phonon-cavity electromechanics
Thursday	4:30 PM - 5:00 PM	Philip Heringlake	MC17: Nanomechanical and Electromechanical Systems XI	Suspended nanowires as ultrasensitive force probes for the exploration proximity forces above surfaces and cavity nano-optomechanics
Thursday	5:00 PM - 5:15 PM	Louis Waquier	MC17: Nanomechanical and Electromechanical Systems XI	Optomechanical measurement of individual nanoparticles: towards the analysis of a single virus
Thursday	5:15 PM - 5:30 PM	Gernot Gruber	MC17: Nanomechanical and Electromechanical Systems XI	Hybrid carbon nanotube resonators for ultrasensitive scanning probe experiments
Thursday	5:30 PM - 5:45 PM	Mohamed Awadein	MC17: Nanomechanical and Electromechanical Systems XI	Nanoscale Electrochemical charge transfer kinetics investigated quantitively by Electrochemical Microwave Microscopy
Thursday	11:30 AM - 12:00 PM	David Zueco	MC25: Emerging Trends in Many-Body Cavity Quantum Electrodynamics IX	Matter in non-perturbative cavity QED
Thursday	12:00 PM - 12:15 PM	Juan Román-Roche	MC25: Emerging Trends in Many-Body Cavity Quantum Electrodynamics IX	Engineering interactions in cavity qed materials
Thursday	12:15 PM - 12:30 PM	David Nagy	MC25: Emerging Trends in Many-Body Cavity Quantum Electrodynamics IX	Quantum noise in cavity Bose-Hubbard systems
Thursday	2:00 PM - 2:15 PM	András Vukics	MC25 : Emerging Trends in Many-Body Cavity Quantum Electrodynamics X	Finite-size scaling and thermodynamic limit of a first-order dissipative phase transition in zero dimension
Thursday	2:15 PM - 2:30 PM	Jonas Larson	MC25 : Emerging Trends in Many-Body Cavity Quantum Electrodynamics X	A quantum normal-superradiant phase transition
Thursday	2:30 PM - 2:45 PM	Dr Thomas Clark	MC25 : Emerging Trends in Many-Body Cavity Quantum Electrodynamics X	Time-resolved observation of a dynamical phase transition of atoms in a cavity
Thursday	2:45 PM - 3:00 PM	Dom Rouse	MC25 : Emerging Trends in Many-Body Cavity Quantum Electrodynamics X	Photon condensation in an arbitrary gauge cavity model
Thursday	3:00 PM - 3:15 PM	Dr Almut Beige	MC25 : Emerging Trends in Many-Body Cavity Quantum Electrodynamics X	A local relativistic approach to light scattering through mirrors and optical cavities

Thursday	3:15 PM - 3:30 PM	Rocío Sáez-Blázquez	MC25 : Emerging Trends in Many-Body Cavity Quantum Electrodynamics X	Lamb shift and vacuum forces in ultrastrong coupling cavity QED
Thursday	4:30 PM - 5:00 PM	Marzena Szymanska	MC25: Emerging Trends in Many-Body Cavity Quantum Electrodynamics XI	Novel Non-equilibrium Phenomena in Quantum Fluids of Light
Thursday	5:00 PM - 5:15 PM	Professor Boris Fainberg	MC25: Emerging Trends in Many-Body Cavity Quantum Electrodynamics XI	Polariton Luminescence of Molecular Systems in a Cavity: Non-Markovian Fano Resonances, Motional Narrowing and Intermolecular Correlation
Thursday	5:15 PM - 5:30 PM	Denis Basko	MC25: Emerging Trends in Many-Body Cavity Quantum Electrodynamics XI	Superradiant Quantum Phase transition for Landau Polaritons with Rashba and Zeeman couplings
Thursday	11:30 AM - 12:00 PM	Dr. Yoji Ohashi	MC35: Collective Effects and Non-Equilibrium Phenomena in Quantum Gases and Superconductors IX	Non-equilibrium BCS-BEC crossover and effects of Fulde-Ferrell type pairing fluctuations in a driven-dissipative Fermi gas
Thursday	12:00 PM - 12:15 PM	Victor Colussi	MC35: Collective Effects and Non-Equilibrium Phenomena in Quantum Gases and Superconductors IX	Probing collective effects in a quantum critical Bose-Hubbard model using polarons.
Thursday	12:15 PM - 12:30 PM	Dr Salvatore Butera	MC35: Collective Effects and Non-Equilibrium Phenomena in Quantum Gases and Superconductors IX	Analogue model of the pre-heating and the back-reaction effect
Thursday	2:00 PM - 2:30 PM	Dr Alberta Ferrarini	MC8: Complex Phases in Soft Matter X	Twisted ground state in achiral anisotropic fluids
Thursday	2:30 PM - 2:45 PM	Dr William Fall	MC8: Complex Phases in Soft Matter X	Learning the Crystallisation Behaviour of Bidisperse Branched Model Polymers using Coarse-Grained Molecular Dynamics Simulations.
Thursday	2:45 PM - 3:00 PM	Kutlwano Gabana	MC8: Complex Phases in Soft Matter X	Fddd - A liquid crystal phase of rotating quadrupoles
Thursday	3:00 PM - 3:30 PM	Gregory Grason	MC8: Complex Phases in Soft Matter X	Medial molecular motifs in tubular soft matter crystals: Revisiting packing frustration and strong-segregation stability of block copolymer gyroids
Thursday	11:30 AM - 11:45 AM	Opening Remarks	MC10: Nanodevice Iontronics IX	Opening Remarks
Thursday	11:45 AM - 12:30 PM	Alberto Morpurgo	MC10: Nanodevice Iontronics IX	Ionic Gating of 2D Semiconductors
Thursday	2:00 PM - 2:45 PM	Paolo Samorì	MC10: Nanodevice Iontronics X	Boosting 2D materials with molecules: multi-responsive and high-performance opto-electronic devices
Thursday	2:45 PM - 3:00 PM	Eva Pogna	MC10: Nanodevice Iontronics X	Controlling the hot electrons cooling in graphene with ionic liquid gating
Thursday	3:00 PM - 3:30 PM	Prof. Susan Fullerton	MC10: Nanodevice Iontronics X	Beyond Batteries: Reimagining the role of ions in electronics
Thursday	4:30 PM - 5:00 PM	Adam Micolich	MC10: Nanodevice Iontronics XI	Integrated Proton-gated Bioelectronic Circuits using Nanowires and Nanoscale Patterned Ion-gating Elements
Thursday	5:00 PM - 5:15 PM	Enver Faella	MC10: Nanodevice Iontronics XI	Impact of ionic-gating on the memory operation of InAs nanowire FETs
Thursday	5:15 PM - 5:30 PM	Guido Goldoni	MC10: Nanodevice Iontronics XI	Spinorial states and spin-orbit coupling in nanowires under strong anisotropic radial electric fields
Thursday	5:30 PM - 5:45 PM	Domenic Prete	MC10: Nanodevice Iontronics XI	Classical to quantum transport crossover in InAs nanowires enabled by electrolyte gating
Thursday	5:45 PM - 6:00 PM	Ms Audrey Steinberger	MC10: Nanodevice Iontronics XI	Interfacial structure of the ionic liquid 1-octyl-3-methylimidazolium dicyanamide on molybdenum disulfide under an applied potential: a combined experimental and molecular dynamics study
Thursday	11:30 AM - 12:00 PM	Panagiotis Grammatikopoulos	MC9: Recent Developments in Gas Phase Synthesis of Nanoparticles and Applications IX	Atomistic Simulations of the Nucleation & Growth of Nanoparticles from the Gas Phase
Thursday	12:00 PM - 12:15 PM	Kateřina Škorvánková	MC9: Recent Developments in Gas Phase Synthesis of Nanoparticles and Applications IX	Velocities of nanoparticles exiting the gas aggregation source through different orifices
Thursday	12:15 PM - 12:30 PM	Joao Coroa	MC9: Recent Developments in Gas Phase Synthesis of Nanoparticles and Applications IX	Influence of the magnetic field configuration of a magnetron on the cluster growth mechanism in a gas aggregation source
Thursday	2:00 PM - 2:30 PM	Prof. Riccardo Ferrando	MC9: Recent Developments in Gas Phase Synthesis of Nanoparticles and Applications X	Growth pathways of metal nanoparticles in the gas phase
Thursday	2:30 PM - 2:45 PM	Ondrej Kylian	MC9: Recent Developments in Gas Phase Synthesis of Nanoparticles and Applications X	Synthesis of mesoporous films of vanadium and vanadium-oxide nanoparticles by means of gas aggregation source
Thursday	2:45 PM - 3:00 PM	Dr Vicky Broadley	MC9: Recent Developments in Gas Phase Synthesis of Nanoparticles and Applications X	Application of soft landed nanoparticles generated using the terminated gas condensation technique to Surface Enhanced Raman
Thursday	3:00 PM - 3:30 PM	Prof. Jose A. De Toro	MC9: Recent Developments in Gas Phase Synthesis of Nanoparticles and Applications X	Gas-Phase Synthesis of Nanoparticles: a Unique Technique for Nanomagnetism
Thursday	4:30 PM - 5:00 PM	Richard Palmer	MC9: Recent Developments in Gas Phase Synthesis of Nanoparticles and Applications XI	Clusters in the real world
Thursday	5:00 PM - 5:15 PM	Jinlong Yin	MC9: Recent Developments in Gas Phase Synthesis of Nanoparticles and Applications XI	Antimicrobial and aging properties of Ag cluster-doped amorphous carbon coatings
Thursday	5:15 PM - 5:30 PM	Mr Roberto Gunnella	MC9: Recent Developments in Gas Phase Synthesis of Nanoparticles and Applications XI	Cylindrical Core-shell nanostructures of Mn-V oxides obtained by electro-spray deposition on graphite

Thursday	5:30 PM - 5:45 PM	Dr. Grant Johnson	MC9: Recent Developments in Gas Phase Synthesis of Nanoparticles and Applications XI	Understanding Chemistry at Well-Defined Electrochemical Interfaces Using Nanoparticle Deposition
Thursday	11:30 AM - 12:00 PM	Dr. Ivan Khaymovich	MC42: Broken Ergodicity and Localisation in Quantum Many-Body Systems IX	Random-matrix approach to ergodicity breaking and slow dynamics in quantum systems
Thursday	12:00 PM - 12:15 PM	Luis Colmenarez	MC42: Broken Ergodicity and Localisation in Quantum Many-Body Systems IX	Sub-diffusion in random regular graphs
Thursday	2:00 PM - 2:30 PM	Benedikt Kloss	MC42: Broken Ergodicity and Localisation in Quantum Many-Body Systems X	Fate of Stark Many-Body Localization in a purely linear potential
Thursday	2:30 PM - 2:45 PM	Dr. Devendra Bhakuni	MC42: Broken Ergodicity and Localisation in Quantum Many-Body Systems X	Suppressing heating by long-range interactions
Thursday	2:45 PM - 3:00 PM	Andrew Hallam	MC42: Broken Ergodicity and Localisation in Quantum Many-Body Systems X	Tuning between continuous time crystals and many-body scars in long-range XYZ spin chains
Thursday	11:30 AM - 12:00 PM	Andrei Kirilyuk	MC51: Ultrafast Dynamics in Magnetic and Strongly-Correlated Materials IX	Ultrafast magnetization reversal by resonant excitation of optical phonons
Thursday	12:00 PM - 12:15 PM	Michael Grimes	MC51: Ultrafast Dynamics in Magnetic and Strongly-Correlated Materials IX	Determination of sub-ps lattice dynamics in FeRh thin films
Thursday	12:15 PM - 12:45 PM	Carlos Hernández-García	MC51: Ultrafast Dynamics in Magnetic and Strongly-Correlated Materials IX	Novel nonlinear phenomena driven by intense, structured femtosecond magnetic pulses
Thursday	2:00 PM - 2:45 PM	Professor Giulio Cerullo	MC51 : Ultrafast Dynamics in Magnetic and Strongly-Correlated Materials X	Ultrafast charge transfer in heterostructures of two-dimensional materials
Thursday	2:45 PM - 3:00 PM	Dennis Epp	MC51 : Ultrafast Dynamics in Magnetic and Strongly-Correlated Materials X	Electron pulse compression for ultrafast LEED
Thursday	3:00 PM - 3:30 PM	Helder Crespo	MC51 : Ultrafast Dynamics in Magnetic and Strongly-Correlated Materials X	What's in a single-cycle light pulse?
Thursday	4:30 PM - 5:00 PM	Klaas-jan Tielrooij	MC51: Ultrafast Dynamics in Magnetic and Strongly-Correlated Materials XI	Ultrafast heat and charge dynamics in graphene-based systems
Thursday	5:00 PM - 5:15 PM	Dr Jake Dudley Mehew	MC51: Ultrafast Dynamics in Magnetic and Strongly-Correlated Materials XI	Ultrafast electronic cooling in graphene/hBN van der Waals heterostructures using time-resolved photocurrent microscopy
Thursday	5:15 PM - 5:45 PM	Professor Yongbing Xu	MC51: Ultrafast Dynamics in Magnetic and Strongly-Correlated Materials XI	Ultrafast manipulation of spin and carrier by a femtosecond pulsed laser in low-dimensional magnetic films
Thursday	5:45 PM - 6:00 PM	Mr Tobias Boorman	MC51: Ultrafast Dynamics in Magnetic and Strongly-Correlated Materials XI	Rapid Enhancement in Spin Decoherence Due to Strong Electron Interactions and Quantum Memory Effects
Thursday	11:30 AM - 12:00 PM	Dr. Dehong Yu	MC7: Exploring Liquid Properties in Confined Geometry (up to mesoscopic scales) IX	Vibrational Properties Beyond Debye Model
Thursday	12:00 PM - 12:15 PM	Dr. Vanessa Coulet	MC7: Exploring Liquid Properties in Confined Geometry (up to mesoscopic scales) IX	Confinement of sulfur in porous carbon matrices
Thursday	12:15 PM - 12:30 PM	Said Pashayev	MC7: Exploring Liquid Properties in Confined Geometry (up to mesoscopic scales) IX	Experimental methods for nanofluidics: focus on sealing technology for delicate nanomaterials
Thursday	2:00 PM - 2:30 PM	Simone Napolitano	MC7: Exploring Liquid Properties in Confined Geometry (up to mesoscopic scales) X	Slow liquid dynamics can facilitate fast equilibration of glasses
Thursday	2:30 PM - 2:45 PM	Massimo Pica Ciamarra	MC7: Exploring Liquid Properties in Confined Geometry (up to mesoscopic scales) X	Long-wavelength fluctuations and dimensionality crossover in confined liquids
Thursday	2:45 PM - 3:00 PM	Robin Cortes-huerto	MC7: Exploring Liquid Properties in Confined Geometry (up to mesoscopic scales) X	Multi-Scale, Non-Equilibrium Molecular Dynamics Simulations in the Adaptive Resolution Method
Thursday	3:00 PM - 3:15 PM	Aidan Chapman	MC7: Exploring Liquid Properties in Confined Geometry (up to mesoscopic scales) X	Polarisation of water under thermal fields: the effect of the molecular dipole and quadrupole moments
Thursday	4:30 PM - 5:00 PM	Fernando Bresme	MC7: Exploring Liquid Properties in Confined Geometry (Up To Mesoscopic Scales) XI	Thermal orientation in fluids and soft matter
Thursday	5:00 PM - 5:15 PM	Prof. Alvaro Domínguez	MC7: Exploring Liquid Properties in Confined Geometry (Up To Mesoscopic Scales) XI	Diffusion in colloidal monolayers: bridging the gap between two and three spatial dimensions
Thursday	5:30 PM - 5:45 PM	Mr. Lars Dammann	MC7: Exploring Liquid Properties in Confined Geometry (Up To Mesoscopic Scales) XI	Simulation of imbibition-induced strain in oriented nanoporous silica (MCM-41) on the single pore scale
Thursday	5:15 PM - 5:30 PM	Sujeet Dutta	MC7: Exploring Liquid Properties in Confined Geometry (Up To Mesoscopic Scales) XI	Wetting/drying mechanisms associated with nanoconfined salt solutions: an optical reflectance study on vapour phase imbibition and adsorption
Thursday	11:30 AM - 12:00 PM	Sergej Flach	MC39: LONE 2022 - Localized Nonlinear Excitations in Condensed Matter IX	Novel thermalization classes of weakly nonintegrable many-body systems

Thursday	12:00 PM - 12:30 PM	Lars English	MC39: LONE 2022 - Localized Nonlinear Excitations in Condensed Matter IX	Engineering electrical lattices to support resonant, gap, or edge localized modes
Thursday	2:00 PM - 2:30 PM	Dr Francis Russell	MC39: LONE 2022 - Localized Nonlinear Excitations in Condensed Matter X	Charge transport in materials by mobile nonlinear inter-atomic interactions called quodons.
Thursday	2:30 PM - 3:00 PM	Jānis Bajārs	MC39: LONE 2022 - Localized Nonlinear Excitations in Condensed Matter X	Multi-class classification of crystal lattice waves
Thursday	3:00 PM - 3:30 PM	Prof. Juan Archilla	MC39: LONE 2022 - Localized Nonlinear Excitations in Condensed Matter X	Polarokinks and polarobreathers in a model for silicate layers
Thursday	4:30 PM - 5:00 PM	Professor Jonthan Wattis	MC39: LONE 2022 - Localized Nonlinear Excitations in Condensed Matter XI	Nonlinear Waves in Fully Nonlinear Mass-in-Mass FPUT Chains
Thursday	5:00 PM - 5:30 PM	Dr Alain Bertrand Togueu Motcheyo	MC39: LONE 2022 - Localized Nonlinear Excitations in Condensed Matter XI	Nonlinear bandgap transmission in a discrete flat-band lattice
Thursday	5:30 PM - 6:00 PM	Ms Regina Finsterhoelzl	MC39: LONE 2022 - Localized Nonlinear Excitations in Condensed Matter XI	Nonequilibrium non-Markovian steady states in open quantum many-body systems: Persistent oscillations in Heisenberg quantum spin chains
Thursday	11:30 AM - 12:00 PM	Prof. Sergio Caprara	MC31: The Physics of Cuprates IX	Charge density fluctuations and the strange-metal behavior of high-Tc superconducting cuprates
Thursday	12:00 PM - 12:30 PM	Antony Carrington	MC31: The Physics of Cuprates IX	Hall effect in overdoped cuprates and its link to Fermi surface reconstruction
Thursday	2:00 PM - 2:30 PM	Floriana Lombardi	MC31: The Physics of Cuprates X	Restoring the strange metal phase in underdoped cuprated via suppression of Charge Density Wave
Thursday	2:30 PM - 3:00 PM	Cyril Proust	MC31: The Physics of Cuprates X	Evidence for coexistence of charge and antiferromagnetic orders in a high Tc superconductor
Thursday	3:00 PM - 3:15 PM	Dr Nadia Stegani	MC31: The Physics of Cuprates X	Transport properties in the strange metal phase of cuprates: a hydrodynamical description
Thursday	3:15 PM - 3:30 PM	Christophe Berthod	MC31: The Physics of Cuprates X	Consistent evidences of Planckian dissipation in the resistivity, specific heat, and optical conductivity of cuprates
Thursday	4:30 PM - 5:00 PM	Blaise Goutéraux	MC31 : The Physics of Cuprates XI	Charge transport in pinned, gapless charge density waves
Thursday	5:00 PM - 5:30 PM	Ulf Gran	MC31 : The Physics of Cuprates XI	A holographic model for surface plasmon-polaritons
Thursday	5:30 PM - 6:00 PM	Martin Greven	MC31 : The Physics of Cuprates XI	The relation between strange-metal behavior, charge order, and superconductivity in the cuprates

Friday 26 August 2022				
Day	**Time**	**Name**	**Session**	**Abstract Title**
Friday	9:00 AM - 10:00 AM	Kostya Trachenko	MC38: Controlled Irradiation Disorder in Model Systems, Organisation, Dynamics, and Transformations XII	Molecular dynamics simulations of radiation damage in disordered waste forms
Friday	10:00 AM - 11:00 AM	Professor Rodrigo Martins	Semi-plenary Speaker	Challenges for a Sustainable Green Deal Approach
Friday	10:00 AM - 11:00 AM	Professor Silke Bühler-Paschen	Semi-plenary Speaker	Electronic topology driven by strong correlations
Friday	11:00 AM - 12:00 PM	Professor Helen Gleeson OBE	Plenary Speaker	What next for nematic liquid crystals?
Friday	9:00 AM - 10:00 AM	Prof. Eli Zeldov	MC22: Nanoscale Fabrication of Superconducting Devices and their Applications XII	SQUID-on-tip nanoscale magnetic and thermal imaging: Glimpse into dissipation in quantum systems down to atomic scale
Friday	9:00 AM - 9:30 AM	Helene Delanoe-Ayari	MC3: Tissue Dynamics: From in Vivo Experiments to in Silico Modelling XII	Mechanical characterisation of migrating monolayers: a kinematic and dynamic study of Stokes flow.
Friday	9:30 AM - 10:00 AM	Marc Karnat	MC3: Tissue Dynamics: From in Vivo Experiments to in Silico Modelling XII	Stokes experiment in an active cellular material: understanding the emergence of a Maxwell rheology
Friday	9:00 AM - 9:30 AM	Dr. Christian Philipp Scheller	MC24: Quantum Electronics at Ultra-low Temperatures XII	Microkelvin electronics on a pulse-tube cryostat with a gate Coulomb blockade thermometer
Friday	9:30 AM - 9:45 AM	Mr George Ridgard	MC24: Quantum Electronics at Ultra-low Temperatures XII	Cryogenic CMOS Voltage Amplifier with variable power consumption for Quantum Transport applications
Friday	9:45 AM - 10:00 AM	Oleksiy Kashuba	MC24: Quantum Electronics at Ultra-low Temperatures XII	Counting charges in interacting one-dimensional conductors
Friday	9:00 AM - 9:30 AM	Jianting Ye	MC10: Nanodevice Iontronics XII	Ionic Gating for Clean Quantum Phases in 2D Materials
Friday	9:30 AM - 9:45 AM	Leonardo Martini	MC10: Nanodevice Iontronics XII	Ionic liquid gating of CVD-growth WS2-based field effect transistors
Friday	9:45 AM - 10:00 AM	Juan I. Beltrán	MC10: Nanodevice Iontronics XII	Emergent magnetism triggered by ionic liquid gating at the metal insulator transition in SrIrO3 ultrathin films
Friday	9:00 AM - 9:15 AM	Yusuke Doi	MC39: LONE 2022 - Localized Nonlinear Excitations in Condensed Matter XII	Standing and traveling discrete breathers in bcc crystals
Friday	9:15 AM - 9:30 AM	Masayuki Kimura	MC39: LONE 2022 - Localized Nonlinear Excitations in Condensed Matter XII	Nonlinear supratransmission in a magnetically coupled elastic rods arranged in three lines
Friday	9:30 AM - 10:00 AM	Dr. Yosuke Watanabe	MC39: LONE 2022 - Localized Nonlinear Excitations in Condensed Matter XII	Experimental and numerical study on excitation and interaction of nonlinear localized oscillations in a mass-spring chain
Friday	10:15 AM - 10:30 AM	Mr Anand Manaparambil	MC39: LONE 2022 - Localized Nonlinear Excitations in Condensed Matter XIII	Nonequilibrium spintronic transport through Kondo impurities
Friday	10:00 AM - 10:15 AM	Jun Takayanagi	MC39: LONE 2022 - Localized Nonlinear Excitations in Condensed Matter XIII	Modeling of dynamics of nonlinear wave propagation in phononic crystals
Friday	10:30 AM - 11:00 AM	Joël François Tsopleface	MC39: LONE 2022 - Localized Nonlinear Excitations in Condensed Matter XIII	Interactions of solitons with a localized impurity in Schrödinger lattices with saturable nonlinearity
Friday	9:00 AM - 9:30 AM	Makoto Hashimoto	MC31: The Physics of Cuprates XII	ARPES study of normal state in high-Tc cuprates
Friday	9:30 AM - 9:45 AM	Prof. Eduardo Da Silva Neto	MC31: The Physics of Cuprates XII	Dynamic electron correlations with charge order wavelength along all directions in the copper oxide plane
Friday	9:45 AM - 10:00 AM	Davide Valentinis	MC31: The Physics of Cuprates XII	Correlation between superfluid stiffness and condensation energy in the Yukawa-SYK model on a lattice