

OCA10 2026 Condensed Matter & Materials Physics

CM1 (magnon and magnetism)

Chair: Wei Chen, Venue/Room: 324

Time	Speaker	Presentation Title
1:30-2:00	Prof Ting Yu	Probing magnons and its coupling with phonons in 2D van der Waals magnets via inelastic scattering spectroscopies
2:00-2:30	Prof Junling Wang	Magnon Generation, Transport and Detection in Multiferroic Heterostructures
2:30-2:50	Mr Adarsh Hullahalli	Magnon Structure around Skyrmions
2:50-3:10	Prof. Ngee-Pong Chang	The Quantum Nature of the Vacuum, a research publication with Chi XIONG
3:10-3:30	Prof. B.V.R. Chowdari	MRS Singapore and ICMAT 2027

CM2 (Advanced Thermal Materials and Transport)

Chair: Yongjie Hu, Venue/Room: 325

Time	Speaker	Presentation Title
1:30-2:00	Prof Bing Li	Emergent Caloric Materials
2:00-2:30	Prof Yongjie Hu	Redefining the Limits of Thermal Transport: Extreme Materials and Emergent Phonon Physics
2:30-3:00	Prof Gang Zhang	Thermal conductivity in solid materials and active control
3:00-3:30	Prof Jie Chen	Phonon Transport in Low-Dimensional Systems

CM3 (Material prediction and characterization)

Chair: Shuai Dong, Venue/Room: 324

Time	Speaker	Presentation Title
3:50-4:20	Prof. Shuai Dong	Autferroicity: physics & materials
4:20-4:50	Prof. Zhen Chen	Revealing Hidden Atomic Order in Functional Materials with Multislice Electron Ptychography
4:50-5:20	Prof. Xunli Wang	Spatial Correlation at the Boson Peak Frequency in Amorphous Materials
5:20-5:40	Prof. Bingbing Liu	High-Pressure Artificial Synthesis of Hexagonal Diamond

CM4 (Correlated Materials)

Chair: Dao-Xin Yao, Venue/Room: 325

Time	Speaker	Presentation Title
3:50-4:20	Prof. Dao-Xin Yao	Models and superconductivity of bilayer and trilayer nickelate superconductors
4:20-4:50	Dr. Xiang Li	Optical Spectroscopy of Quantum Materials Under Extreme Conditions
4:50-5:20	Prof. Xiao Yan Xu	Resolving Quantum Criticality in the Honeycomb Hubbard Model
5:20-5:50	Mr. WeiQiang Yu	Cascade of Field-induced Spin Liquids in a Bilayer Triangular-lattice Antiferromagnet

CM5 (Emergent Phenomena in Quantum Materials 1)

Chair: Ting-Hua Lu, Venue/Room: 324

Time	Speaker	Presentation Title
1:30-2:00	Prof Pin-Jui Hsu	Revealing Atomic-Scale Spin Textures in Low-Dimensional Honeycomb/Magnetic Heterostructures
2:00-2:30	Prof Jan-Chi Yang	Deterministic Manipulation of Structural Variants in Freestanding Antiferroelectric Membranes
2:30-3:00	Prof Mon-Shu Ho	Multiferroic C84 Fullerenes on Si(111): Defect-Driven Quantum Transport and Resistive Switching for Next-Generation Memory
3:00-3:30	Prof Ping-Hui Lin	Ultrafast Carrier Relaxation in Graphite Probed via kz-Resolved Tr-ARPES

CM6 (Superconductivity and superfluidity -1)

Chair: Maw-Kuen Wu, Venue/Room: 325

Time	Speaker	Presentation Title
1:30-2:00	Prof. Phillip Wu	QUASIPARTICLE EXCITATIONS IN $\text{FeSe}_{0.45}\text{Te}_{0.55}$: A THERMAL TRANSPORT PERSPECTIVE ON SUPERCONDUCTING SYMMETRY
2:00-2:30	Prof. Yihua Wang	PURE NEMATIC TRANSITION INSIDE THE SUPERCONDUCTING DOME OF AN IRON-CHALCOGENIDE SUPERCONDUCTOR
2:30-3:00	Mr. Jiaxin Yin	Topological pair density wave
3:00-3:30	Prof. Junfeng He	Electronic structure and energy scales in superconducting $(\text{La,Pr,Sm})\text{Ni}_2\text{O}_7$ films

CM7 (Emergent Phenomena in Quantum Materials 2)

Chair: Pin-Jui Hsu, Venue/Room: 324

Time	Speaker	Presentation Title
3:50-4:20	Prof Ting-Hua Lu	ANGULAR MOMENTUM-DRIVEN CONTROL OF OPTICAL AND ELECTRICAL RESPONSES IN MONOLAYER MOS2
4:20-4:50	Prof Yann-Wen Lan	Engineering Light-Matter Interactions via Orbital Angular Momentum
4:50-5:20	Prof Po-Yao Chang	Non-Hermitian quantum systems and non-unitary criticality
5:20-5:50	Prof You-Sheng Li	Tuning Unconventional Superconductor Sr2RuO4 by Uniaxial Stress

CM8 (Topological Materials)

Chair: Yang Zhang, Venue/Room: 325

Time	Speaker	Presentation Title
3:50-4:20	Dr Su Ying Quek	Quantum Geometry in Non-Linear Optics with Excitons
4:20-4:50	Prof Shu Zhang	Topological Magnon-Phonon Hybridization in 2D Antiferromagnets
4:50-5:20	Ms Xiaoxue Liu	Stacking-orientation and Twist-angle Control on Integer and Fractional Chern Insulators in Moiré Rhombohedral Graphene
5:20-5:50	Prof. Chen Hu	(remote talk/video recording) Diverse Moiré Excitonic Physics in 2D Van der Waals Superlattices

CM9 (Emergent Phenomena in Quantum Materials 3)

Chair: Ying Jer Kao, Venue/Room: 324

Time	Speaker	Presentation Title
1:30-2:00	Prof Tay-Rong Chang	Orbital topology induced orbital Hall effect in two-dimensional insulators
2:00-2:30	Prof Chih-Wei Luo	Three-dimensional collective amplitude mode dynamics in charge-density-wave materials
2:30-3:00	Dr Cheng-Maw Cheng	Epitaxial Growth and Electronic Structure of Polar-Stacked h-BN Multilayers
3:00-3:30	Prof Qingyu Cai	From Correlation Irreversibility to Constraints on Eigenstate Thermalization

CM10 (Superconductivity and superfluidity -2)

Chair: Phillip Wu, Venue/Room: 325

Time	Speaker	Presentation Title
1:30-2:00	Prof. Chung-Yu Mou	Toward completing the phase diagram of high-T _c cuprate superconductors
2:00-2:30	Prof. Zhuoyu Chen	Thin-film nickelate superconductivity and electronic structures
2:30-3:00	Prof. Lingyuan Kong	Cooper-pair density modulation state in an iron-based superconductor
3:00-3:30	Dr. Xiao Lin	Indication of time-reversal symmetry breaking superconductivity in Kagome CsV ₃ Sb ₅

CM11 (Nanomaterials and Devices)

Chair: Yit-Tsong Chen, Venue/Room: 326

Time	Speaker	Presentation Title
1:30-2:00	Prof Yit-Tsong Chen	2D Metal Dichalcogenides-Based Nanoelectronic Devices for Intelligent Human-Robot Interface, Photoemission, and Biosensing Applications
2:00-2:30	Prof ZeXiang Shen	TWO-DECADES OF GRAPHENE: PERSPECTIVE INDUSTRIAL SCALE APPLICATIONS
2:30-2:50	Ms Fengyu Li	Designing "more is different" functional nanomaterials via "bottom-up" approach
2:50-3:10	Mr Ignatio Glory Winning	Engineering Blue Emission in CsPbBr ₃ via Rb-doped Multiple Quantum Wells
3:10-3:30	Dr. Di Cheng	Rotational anisotropy Raman spectrometer for high-sensitivity crystallographic symmetry analysis

CM12 (Magnetic Quantum Materials)

Chair: Lu Li , Venue/Room: 324

Time	Speaker	Presentation Title
3:50-4:20	Prof XianGang Wan	Magnetic Structures Database from Symmetry-aided High-Throughput Calculations
4:20-4:50	Mr Hau Tian Teo	Energy-momentum causality of interacting Weyl quasiparticles
4:50-5:20	Prof Huaiqiang Wang	Alteraxial phonons in collinear magnets
5:20-5:40	Prof. Danfeng Li	Magnetism and Field Re-entrant Superconductivity in Doped Infinite-layer Samarium Nickelates

CM13 (Fractional quantum states)

Chair: Jeanie Lau, Venue/Room: 325

Time	Speaker	Presentation Title
3:50-4:20	Prof. Wang Yao	Abelian and non-Abelian fractional Chern insulators in non-Chern bands
4:20-4:50	Prof Marc Bockrath	Many-body phases in multilayer graphene: from half-integer quantum Hall effects to magnetism
4:50-5:20	Prof Xi Lin	Cascade of Fractional Quantum Hall States in 2D System
5:20-5:50	Prof. Peng Ye	Fractonic superfluids: from generalized Hohenberg-Mermin-Wagner theorems to vortex fractionalization
5:50-6:20	Mr. Zi-Xiang Hu	Universal properties and half-filled fractional quantum Hall States in single and multilayer Graphene

CM14 (Materials Theory)

Chair: Yan Sun, Venue/Room: 326

Time	Speaker	Presentation Title
3:50-4:20	Mr Yan Sun	Symmetry-conserving maximally projected Wannier function and its applications in strong physical response materials designment
4:20-4:50	Prof. Rundong Zhao	Physics-Guided and Interpretable Machine Learning for Materials Property Prediction
4:50-5:10	Prof Kam Tuen Law	Quantum Metric Length and Quantum Metric Localization
5:10-5:30	Prof Linhu Li	Symmetry-protected Control of Liouvillian Topological Phases via Hamiltonian Band Topology
5:30-5:50	Ms Runyu Chen	BOSON DENSITY IN K_3C_{60} UNDER PRESSURE: INVERSION FROM $T_c(a)$ DATA WITHIN A BOSON-FERMION MODEL