

Condensed Matter Physics B*:

magnetism, correlated-electron systems and topological materials

Meilan Ballroom B

CMP - B	Oct 20	Oct 21	Oct 22	Oct 23	Oct 24
Chair	Plenary Session				Qing-Dong Jiang
09:00-09:25					Dongchen Qi
09:25-09:40					Yantao Wu
09:40-9:55					Yidun Wan
9:55-10:20					Vladimir Bubanja
10:20-10:50	Break				
Chair	Plenary Session	Yukako Fujishiro	Rui Zhou	No CMP	Plenary Session
10:50-11:15		Jun Sung Kim	Wei Li		
11:15-11:30		Peng Cheng	Yixuan Huang		
11:30-11:45		Katsumi Tanigaki	Tingyu Gao		
11:45-12:10		Satoru Hayami	Weiqiang Yu		
12:10-14:00	Lunch				
13:00-14:00		Poster			
Chair	Jong Seok Lee	No CMP	Wei Li	Yantao Wu	
14:00-14:25	Yukako Fujishiro		Junxiong Hu	Vic K. T. Law	
14:25-14:50	Kai-Xuan Zhang		Zhengcheng Gu	Youichi Yanase	
14:50-15:05	Anirban Kundu		Xulong Wang	Qing-Dong Jiang	
15:05-15:35	Ji-Hee Kim 15:05-15:30		Wenge Yang 15:05-15:30	Yuan Yao 15:05-15:20	
				Mingpu Qin 15:20-15:35	
15:35-16:00	Break				
Chair	Anirban Kundu	No CMP	Wenge Yang	Youichi Yanase	
16:00-16:25	Lin He		Rui Zhou	Haifeng Du	
16:25-16:50	Hongyun Zhang		Mathias Klaeui	Yutaka Akagi	
16:50-17:45	Jong Seok Lee 16:50-17:15		Swee K. Goh 16:50-17:15	Nakhyeon Choi 16:50-17:05	
	Wei Yang 17:15-17:30		Xinchao Huang 17:15-17:30	Yanhao Tang 17:05-17:20	
	Kaihui Liu 17:30-17:45		Hiroyuki Nojiri 17:30-17:45	Hiro Ishizuka 17:20-17:35	

*This session is co-branded with AC2MP2025.

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Date: October 20

chair	Jong Seok Lee	
14:00-14:25	Yukako Fujishiro RIKEN	Topological phase transitions in cubic chiral magnets explored under extreme conditions
14:25-14:50	Kai-Xuan Zhang Seoul National University	Purely electrical control of vdW ferromagnet Fe_3GeTe_2 and helical antiferromagnet $\text{Ni}_{1/3}\text{NbS}_2$
14:50-15:05	Anirban Kundu Asia Pacific Center for Theoretical Physics	Dzyaloshinskii–Moriya interaction mediated by 2D electron gas in altermagnets
15:05-15:30	Ji-Hee Kim Pusan National University	Hot carrier diffusion and extraction in 2D materials
15:30-16:00	Break	
chair	Anirban Kundu	
16:00-16:25	Lin He Beijing Normal University	STM characterization of flat bands in 2D systems
16:25-16:50	Hongyun Zhang Tsinghua University	Flat band engineering in twisted & stacked graphene/graphite
16:50-17:15	Jong Seok Lee GIST	Demagnetization and depolarization dynamics in oxide heterostructures
17:15-17:30	Wei Yang Institute of Physics, CAS	Observation of Integer and Fractional Chern insulators in high Chern number flatbands
17:30-17:45	Kaihui Liu Peking University	Optical crystals of 2D materials

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Date: October 21

chair	Yukako Fujishiro	
10:50-11:15	Jun Sung Kim Pohang University of Science and Technology	Novel angular magneto-transport properties of low-dimensional topological magnets
11:15-11:30	Peng Cheng Renmin University of China	FePd ₂ Te ₂ : a newly discovered 2D magnet with novel structures and physical properties
11:30-11:45	Katsumi Tanigaki Beijing Academy of Quantum Information Sciences	Intercorrelations among magnon, electron and phonon of antiferromagnetic itinerant BaMn ₂ Pn ₂ (Pn:As, Sb, Bi) with PT symmetry
11:45-12:10	Satoru Hayami Hokkaido University	Stabilization mechanisms of topological spin textures in itinerant magnets

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Date: October 22

chair	Rui Zhou	
10:50-11:15	Wei Li Institute of Theoretical Physics, CAS	Spin Supersolid on a Triangular Lattice: Spin Dynamics, Giant Magnetocalorics, and Spin Supercurrent
11:15-11:30	Yixuan Huang RIKEN	Dissipationless dynamics of spin supersolid states in a spin-1/2 triangular antiferromagnet with impurities
11:30-11:45	Tingyu Gao Hainan Micro-City Future School	A Systematic Construction of the Kalmeyer–Laughlin Chiral Spin Liquid in Lattice Models
11:45-12:10	Weiqiang Yu Renmin University of China	Field-Induced Quantum Phase Transitions and Quantum Criticality in Low-Dimensional Magnetic Materials
12:10-14:00	Lunch	
chair	Wei Li	
14:00-14:25	Junxiong Hu University of Electronic Science and Technology of China	Emergent phenomena in graphene supermoiré lattice
14:25-14:50	Zhengcheng Gu The Chinese University of Hong Kong	Classification and construction of crystalline topological superconductors and insulators in interacting fermion systems
14:50-15:05	Xulong Wang Hong Kong Baptist University	Non-Hermitian skin effects on ideal flat bands
15:05-15:30	Wenge Yang Center for High Pressure Science and Technology Advanced Research	Enhanced Ising superconductivity in a unicompositional bulk 4Hb-TaS ₂ superlattice via pressure
15:30-16:00	Break	
chair	Wenge Yang	
16:00-16:25	Rui Zhou Institute of Physics, CAS	Synergetic Extreme Condition User Facility: A New 'Playground' for Condensed Matters
16:25-16:50	Mathias Klaui Johannes Gutenberg University Mainz	Topological Spin-orbitronics
16:50-17:15	Swee K. Goh The Chinese University of Hong Kong	Fermi surface of vanadium-based kagome metals under hydrostatic pressure via quantum oscillations
17:15-17:30	Xinchao Huang European XFEL	High photon energy X-ray absorption and emission spectrometers at FXE instrument of European XFEL
17:30-17:45	Hiroyuki Nojiri Tohoku University	Compact Pulsed Magnetic Field for Quantum Beam Experiments

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Date: October 23

chair	Yantao Wu	
14:00-14:25	Vic K. T. Law The Hong Kong University of Science and Technology	Quantum Metric Lengths in Flat Band Superconductors
14:25-14:50	Youichi Yanase Kyoto University	Multiple superconducting phases, fractional vortex, and topological superconductivity in locally noncentrosymmetric systems
14:50-15:05	Qing-Dong Jiang Shanghai Jiao Tong University	Virtual Photons, Real Effects: The Rise of Cavity Quantum Materials
15:05-15:20	Yuan Yao Shanghai Jiao Tong University	Non-perturbative approach to many-body physics by twisting operators
15:20-15:35	Mingpu Qin Shanghai Jiao Tong University	Augmenting Density Matrix Renormalization Group with Clifford Circuits
15:35-16:00	Break	
chair	Youichi Yanase	
16:00-16:25	Haifeng Du High Magnetic Field Laboratory, CAS	Electrical manipulation of a magnetic hopfion
16:25-16:50	Yutaka Akagi Ochanomizu University	CP ² Skyrmion crystals in spin-1 quantum magnets
16:50-17:05	Nakhyeon Choi Yonsei University	Chiral magnon in strained altermagnet from first-principles calculations
17:05-17:20	Yanhao Tang Zhejiang University	Chiral spin mode in semiconductor moiré superlattices
17:20-17:35	Hiro Ishizuka Institute of Science Tokyo	Nonlinear Optical Response of Truly Chiral Phonons: Phonon Angular Momentum and Peltier Effect

Date: October 24

chair	Qing-Dong Jiang	
9:00-9:25	Dongchen Qi Queensland University of Technology	Engineering Diamond Surfaces for Quantum Diamondtronics
9:25-9:40	Yantao Wu Institute of Physics, CAS	Accurate Gauge-Invariant Tensor Network Simulations for Abelian Lattice Gauge Theory in (2+1)D: ground state and real-time dynamics
9:40-9:55	Yidun Wan Fudan University	Landau-Ginzburg Paradigm of Topological Phases
9:55-10:20	Vladimir Bujanja Measurement Standards of New Zealand	Coulomb blockade of transport in topological superconductor nanowires