

Condensed Matter Physics A*:
unconventional superconductivity and related phenomena

Meilan Ballroom A

CMP - A	Oct 20	Oct 21	Oct 22	Oct 23	Oct 24
Chair	Plenary Session				Yusuke Nomura
09:00-09:25					Zhuoyu Chen
09:25-09:40					Motofumi Noda
09:40-9:55					Xiaohu Zheng
9:55-10:20					King Yau Yip
10:20-10:50	Break				
Chair	Plenary Session	Jie Shen	Jinguang Cheng	No CMP	Plenary Session
10:50-11:15		Huan Yang	Dai Aoki		
11:15-11:30		Gang Xu	Qing Li		
11:30-11:45		Shuo Yang	Yongkang Luo		
11:45-12:10		Tuson Park	Guoqing Zheng		
12:10-14:00	Lunch				
13:00-14:00		Poster			
Chair	Kee Hoon Kim	No CMP	Hanghui Chen	Yanwu Xie	
14:00-14:25	Xianhui Chen		Keun Su Kim	Hui Chen	
14:25-14:50	Meng Wang		Daoxin Yao	Canli Song	
14:50-15:05	Yaomin Dai		Peng Li	Zhesen Yang	
15:05-15:30	Kazuhiko Kuroki		Jun Zhao	Hong Yao	
15:30-16:00	Break				
Chair	Kazuhiko Kuroki	No CMP	Jun Zhao	Hiroyuki Nojiri	
16:00-17:50	Jian Wang 16:00-16:25		Donglai Feng 16:00-16:25	Yu-Te Hsu 16:00-16:20	
	Kui Jin 16:25-16:50		Jinguang Cheng 16:25-16:50	Mingu Kang 16:20-16:40	
	Kee Hoon Kim 16:50-17:15		Yusuke Nomura 16:50-17:15	Duc Anh Phan 16:40-17:10	
	Tian Le 17:15-17:30		Hanghui Chen 17:15-17:30	Hoi Chun Po 17:10-17:30	
	Jie Shen 17:30-17:45	Yanwu Xie 17:30-17:45	Weiyao Zhao 17:30-17:50		

*This session is co-branded with AC2MP2025.

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Date: October 20

Chair	Kee Hoon Kim	
14:00-14:25	Xianhui Chen University of Science and Technology of China	Superconductivity and density wave transition in Ruddlesden-Popper phase nickelates
14:25-14:50	Meng Wang Sun Yat-sen University	Doping effects on structural transition and superconductivity in bilayer nickelate
14:50-15:05	Yaomin Dai Nanjing University	Evolution of electronic correlations in the Ruddlesden-Popper nickelates
15:05-15:30	Kazuhiko Kuroki Osaka University	Theoretical study on high temperature superconductivity in a bilayer nickelate $\text{La}_3\text{Ni}_2\text{O}_7$ and related materials
15:30-16:00	Break	
Chair	Kazuhiko Kuroki	
16:00-16:25	Jian Wang Peking University	High-temperature field-free superconducting diode effect in high- T_c cuprates
16:25-16:50	Kui Jin Institute of Physics, CAS	Enhanced superconductivity in FeSe and the physics behind it
16:50-17:15	Kee Hoon Kim Seoul National University	Signature of unconventional superconductivity in kagome metal $\text{Cs}(\text{V,Ti})_3\text{Sb}_5$
17:15-17:30	Tian Le Zhejiang University	Superconducting interference patterns, zero-field diode effects and intrinsic Josephson effects in kagome CsV_3Sb_5
17:30-17:45	Jie Shen Institute of Physics, CAS	Superconducting Diode Effect and Kitaev Chain based on Hybrid Superconductor-nanowire System

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Date: October 21

Chair	Jie Shen	
10:50-11:15	Huan Yang Nanjing University	Shallow band and vortex bound states in iron-based superconductors
11:15-11:30	Gang Xu Huazhong University of Science and Technology	How to design topological superconductivity from ab initio calculations
11:30-11:45	Shuo Yang Tsinghua University	Unveiling Stripe-shaped Charge Density Modulations in Doped Mott Insulators
11:45-12:10	Tuson Park Sungkyunkwan University	Pseudogap and Decoupled Quantum Criticalit in Sn-doped CeRhIn5

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Date: October 22

Chair	Jinguang Cheng	
10:50-11:15	Dai Aoki Tohoku University	Spin-triplet superconductivity and field-induced phenomena in UTe_2
11:15-11:30	Qing Li Nanjing University	Unconventional superconductivity emerging along with the strange-metal behavior in UAs_2 under pressure
11:30-11:45	Yongkang Luo Huazhong University of Science and Technology	Constraints on the superconducting order parameter of pressurized UTe_2 from point-contact spectroscopy
11:45-12:10	Guoqing Zheng Okayama University	Multiple phases in spin-triplet superconductors $\text{Cu}_x\text{Bi}_2\text{Se}_3$ and $\text{K}_2\text{Cr}_3\text{As}_3$
12:10-14:00	Lunch	
Chair	Hanghui Chen	
14:00-14:25	Keun Su Kim Yonsei University	Pseudogap and rotonic dispersion in a doped layered insulator
14:25-14:50	Daoxin Yao Sun Yat-sen University	Multi-orbital models and superconductivity of $\text{La}_3\text{Ni}_2\text{O}_7$ thin films
14:50-15:05	Peng Li Quantum Science Center of Guangdong-Hongkong-Macao Greater Bay Area	Angle-resolved photoemission spectroscopy of superconducting $(\text{La},\text{Pr})_3\text{Ni}_2\text{O}_7/\text{SrLaAlO}_4$ heterostructures
15:05-15:30	Jun Zhao Fudan University	Magnetic correlations and superconductivity in trilayer and bilayer nickelates
15:30-16:00	Break	
Chair	Jun Zhao	
16:00-16:25	Donglai Feng ShanghaiTech University	Resolving the Electronic Structure of Infinite-Layer Nickelates by Angle-Resolved Photoemission
16:25-16:50	Jinguang Cheng Institute of Physics, CAS	Pressure driven high- T_c superconductivity in the infinite-layer and Ruddlesden-Popper bilayer nickelates
16:50-17:15	Yusuke Nomura Tohoku University	Strong-coupling high-temperature superconductivity emerging from correlated band insulator
17:15-17:30	Hanghui Chen NYU Shanghai	Ab initio many-body calculations of nickelate superconductors
17:30-17:45	Yanwu Xie Zhejiang University	Interfacial Coexistence of Superconductivity and Ferroelectricity in Oxide Heterostructures

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Date: October 23

Chair	Yanwu Xie	
14:00-14:25	Hui Chen Institute of Physics, CAS	Controllable quasi-two-dimensional superconductivity and pair density wave in kagome metals
14:25-14:50	Canli Song Tsinghua University	Atomic-scale engineering and emergent electronic orders in $\text{Ba}(\text{Fe}_{1-x}\text{Co}_x)_2\text{As}_2$ films
14:50-15:05	Zhesen Yang Xiamen University	Complex frequency fingerprint
15:05-15:30	Hong Yao Tsinghua University	PDW superconductivity
15:30-16:00	Break	
Chair	Hiroyuki Nojiri	
16:00-16:20	Yu-Te Hsu National Tsing Hua University	To superconduct or not to superconduct: lessons learnt from three correlated oxides (DCMP Award)
16:20-16:40	Mingu Kang Seoul National University	Three different charge orders in kagome lattice materials (DCMP Award)
16:40-17:10	Duc Anh Phan Phenikaa University	Development of the ECNLE Theory for the Glass Transition in Bulk and Confined Systems (DCMP Award)
17:10-17:30	Hoi Chun Po Hong Kong University of Science and Technology	Tensor network representations of a Chern insulator and entanglement renormalization of its chiral edge (DCMP Award)
17:30-17:50	Weiyao Zhao Monash University	Room temperature quantum geometry effect in TbMn_6Sn_6 (DCMP Award)

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Date: October 24

Chair	Yusuke Nomura	
9:00-9:25	Zhuoyu Chen Southern University of Science and Technology	Ambient-pressure superconductivity and electronic structures of nickelate films with engineered hybrid structures
9:25-9:40	Motofumi Noda University of Tokyo	Discovery of antiferromagnetic meron lattice in a centrosymmetric rare-earth magnet $\text{GdNi}_2\text{B}_2\text{C}$
9:40-9:55	Xiaohu Zheng Beijing Academy of Quantum Information Sciences	Evidence for Mott Gap Softening Coinciding with Spin Correlations Collapse in $\alpha\text{-RuCl}_3$
9:55-10:20	King Yau Yip National University of Singapore	The Quest for High Temperature Superconducting Nickelates