

## 26 July (Thursday) **Conference program tentative\_19 July**

Time	Activity	Venue
14:30-17:30	Registration	E4 G/F Lobby
18:00-20:00	Dinner hosted by Director of Institute of Applied Physics and Materials Engineering	N1-G008

## 27 July (Friday)

Time	Activity	Venue
09:00-09:15	Opening Remarks 1. Prof. Yonghua SONG, Rector, University of Macau 2. Prof. Xiang ZHANG, The University of Hong Kong 3. Prof. Xin-Cheng XIE, National Natural Science Foundation of China	E4-G078
09:15-09:20	Group Photo	
Plenary Presentation (chaired by Prof. Zikang Tang, University of Macau)		
09:20-09:40	<b>Photonics beyond diffraction limit</b> By Prof. Xiang ZHANG, The University of Hong Kong	E4-G078
09:40-10:10	<b>When Big Data Meets Physics</b> By Prof. Lionel M. S. NI, University of Macau	
10:15-10:35	Coffee Break	E4 G/F Lobby
10:35-11:10	<b>Water: Soft in Nature Hard in Science</b> By Prof. Enge WANG, Peking University & Chinese Academy of Sciences	E4-G078
11:10-11:40	<b>Introduction of Nuclear Research Centre in Huizhou</b> By Prof. Wenlong ZHAN, Chinese Academy of Sciences	
11:40-12:00	<b>Towards p-Type Doping for ZnO Light-Emitting Devices</b> By Prof. Zikang TANG, University of Macau	
Advanced Technology for Scientific Research		
12:00-12:12	<b>Applications of Inert Atmosphere Technologies and Equipment</b> By Delong ZHANG, Vigor Gas Purification Technologies (Suzhou) Co.,Ltd	E4-G078
Lunch		
12:15-13:55	Buffet lunch	W21-G019
13:00-14:00	Internal meeting of Physical Society of Hong Kong (by invitation)	E4-G051
Concurrent Sessions (Please refer details to subsequent pages)		
14:00-18:00	Session 1: Astrophysics and Astronomy (page 3)	E4-3052
	Session 2: Atomic, Molecular and Optical Physics (page 5)	E4-1051
	Session 3: Biophysics and Soft Matter (page 7)	E4-3054
	Session 4: Condensed Matter Physics (page 9)	E4-1052
	Session 5: Interdisciplinary Physics (page 11)	E4-3053
	Session 6-1: Materials Physics and Engineering (page 12)	E4-3062
	Session 6-2: Materials Physics and Engineering (page 14)	E4-3055
	Session 7: Scattering, Particle, Nuclear and Plasma Physics (page 16)	E4-3056
	Session 8: Quantum & Statistical Physics (page 17)	E4-3063
Banquet Dinner		
18:30-20:30	Bus pick-up point and departure time: <b>E4 G/F Lobby from 18:00-18:20</b>	Oasis, Galaxy Macau

## 28 July (Saturday)

Time	Activity	Venue
<b>Concurrent Sessions</b>		
09:00-12:05	Session 1: Astrophysics and Astronomy (page 4)	E4-3052
	Session 2: Atomic, Molecular and Optical Physics (page 6)	E4-1051
	Session 3: Biophysics and Soft Matter (page 8)	E4-3054
	Session 4: Condensed Matter Physics (page 10)	E4-1052
	Session 6-1: Materials Physics and Engineering (page 13)	E4-3062
	Session 6-2: Materials Physics and Engineering (page 15)	E4-3055
	Session 8: Quantum & Statistical Physics (page 18)	E4-3063
<b>Lunch</b>		
12:05-13:55	Buffet lunch	W21-G019
13:00-14:00	Internal meeting of Physical Society of Guangdong (by invitation)	E4-1061
13:00-14:00	Internal meeting of The Physical Society of Macao (by invitation)	E4-G051
<b>Plenary Presentation</b> ( <i>chaired by Prof. Zidan WANG, The University of Hong Kong and Prof. Biao WANG, Sun Yat-Sen University</i> )		
14:00-14:30	<b>Discrete scale invariance in topological semimetals</b> By Prof. Xin-Cheng XIE, Peking University	E4-G078
14:30-15:00	<b>Quantum transport in Dirac semimetal-superconductor hybrid devices</b> By Prof. Dapeng YU, Southern University of Science and Technology	
15:00-15:30	<b>Study on Improvement Technology for Durability of Concrete Under the condition of severe environment</b> By Prof. Changwen MIAO, Southeast University	
15:30-16:00	<b>Binary evolution and its applications</b> By Prof. Zhanwen HAN, Chinese Academy of Sciences	
16:00-16:30	Coffee Break / Poster Exhibition	E4 G/F Lobby
17:00-17:30	<b>夸克胶子新物质形态的硬探针信号及相关物理进展</b> By Prof. Enke WANG, South China Normal University	E4-G078
17:30-18:00	<b>China Spallation Neutron Source: a rising star on the horizon for neutron scattering in China</b> By Prof. Fangwei WANG, Chinese Academy of Sciences	
18:00-18:10	Closing Speech Prof. Biao WANG, Sun Yat-Sen University  Best Poster Award Presentation	

## 29 July (Sunday)

Time	Activity	Venue
08:30-12:30	Half-day city tour	N/A

## Concurrent session 1: Astrophysics and Astronomy

27 July (Friday)

14:00 – 18:05	<b>Concurrent session 1: Astrophysics and Astronomy</b>
<b>Venue:</b>	<b>Anthony Lau Building (E4), E4-3052</b>
<b>Chairpersons:</b>	<b>1. Kwing Lam Chan   2. Tao Cai   3. Long Long Feng</b>
14:00 – 14:25	<b>Keynote presentation</b>
	<b>Turbulence on Cosmic Scales</b> Long Long Feng, Sun Yat-sen University. MC: Kwing Lam Chan
14:25 – 15:55	<b>Invited presentations</b>
14:25 – 14:40	<b>Numerical Modeling of the Carbon Dioxide Cycle in the Martian Atmosphere</b> Kim Chiu Chow, Macau University of Science and Technology. MC: Tao Cai
14:40 – 14:55	<b>Magnetars: the Strongest Magnets in the Universe</b> Stephen C.-Y. Ng, The University of Hong Kong. MC: Tao Cai
14:55 – 15:10	<b>The Tai Chi in Star Formation</b> Hua-bai Li, Chinese University of Hong Kong. MC: Tao Cai
15:10 – 15:25	<b>Characterizing the Radiative and Timing Anomaly of Magnetars</b> Chin-Ping Hu, The University of Hong Kong. MC: Tao Cai
15:25 – 15:40	<b>Convective Dynamics of Gaseous Planets</b> Kwing Lam Chan, Macau University of Science and Technology. MC: Tao Cai
15:40 – 15:55	<b>Variable Mass Accretion Rates in Star Formation</b> Yang Gao, Sun Yat-sen University. MC: Tao Cai
15:55 – 16:15	Tea/coffee break, poster, discussion
16:15 – 16:40	<b>Keynote presentation</b>
	<b>Multimessenger observations of a flaring blazar coincident with a high-energy neutrino</b> Pablo M. Saz Parkinson, The University of Hong Kong. MC: Long Long Feng
16:40 – 17:55	<b>Invited presentations</b>
16:40 – 16:55	<b>Energy Dissipation Processes in Solar Wind Turbulence</b> Yi Wang, Harbin Institute of Technology, Shenzhen. MC: Long Long Feng
16:55 – 17:10	<b>What Can We Learn about Red Giants from Asteroseismology</b> Tao Wu, Yunnan Observatories, CAS. MC: Long Long Feng
17:10 – 17:25	<b>Gamma-ray Burst Jet Breaks Revisited and GRB Observing Plan</b> Xiang-Gao Wang, Guangxi University. MC: Long Long Feng
17:25 – 17:40	<b>Numerical Simulations of Efficient Turbulent Convection</b> Tao Cai, Macau University of Science and Technology. MC: Long Long Feng
17:40 – 17:55	<b>Prodigious and Continuous Formation of Super Star Clusters from Cooled Intracluster Gas</b> Jeremy Lim, The University of Hong Kong. MC: Long Long Feng
17:55 – 18:05	<b>Contributed presentations</b>
	<b>Searching for Soft Pulsars with the Fermi Large Area Telescope</b> Brent Limyansky, University of California. MC: Long Long Feng
After 18:10	<b>Banquet Dinner (Hotel: Galaxy Macau, Bus pick-up point &amp; time: E4 G/F Lobby @ 18:10 pm)</b>

## 28 July (Saturday)

<b>09:00 – 12:10</b>	<b>Concurrent session 1: Astrophysics and Astronomy</b>
<b>Venue:</b>	<b>Anthony Lau Building (E4), E4-3052</b>
<b>Chairpersons:</b>	<b>1. Cong Yu    2. Man Hoi Lee</b>
<b>09:00 – 09:25</b>	<b>Keynote presentation</b>
	<b>Dynamics of Circumstellar Planets in Binary System</b> Man Hoi Lee, University of Hong Kong. MC: Cong Yu
<b>09:25 – 10:25</b>	<b>Invited presentations</b>
09:25 – 09:40	<b>The Structure and Dynamical Roles of Circumplanetary Discs</b> Hsiang-Hsu Wang, Chinese University of Hong Kong. MC: Cong Yu
09:40 – 09:55	<b>Characteristics Time of Stellar Flares on Solar-like Stars</b> Yan Yan, National Astronomical Observatory, CAS. MC: Cong Yu
09:55 – 10:10	<b>Multi-fluid MHD Simulation of the Magnetic Flux Rope in the Ionosphere of Venus and Mars</b> Liang Hai Xie, Macau University of Science and Technology. MC: Cong Yu
10:10 – 10:25	<b>The Dependence of Flux Transfer Events on Interplanetary Magnetic Field Clock Angles</b> Tian Ran Sun, National Space Science Center, CAS. MC: Cong Yu
10:25 – 10:45	Tea/coffee break, poster, discussion @E4 G/F Lobby
<b>10:45 – 11:10</b>	<b>Keynote presentation</b>
	<b>The Formation of Super-Earths by Tidally Forced Turbulence</b> Cong Yu, Sun Yat-Sen University. MC: Man Hoi Lee
<b>11:10 – 12:10</b>	<b>Invited presentations</b>
11:10 – 11:25	<b>HKU's Laboratory for Space Research - an interdisciplinary nexus for the future</b> Quentin Parker, The University of Hong Kong. MC: Man Hoi Lee
11:25 – 11:40	<b>Dynamic Processes of Martian Dust Storms in the Northern Mid-latitude Region during the Storm Season</b> Jing Xiao, Macau University of Science and Technology. MC: Man Hoi Lee
11:40 – 11:55	<b>Shock Acceleration with Focused Transport Model</b> Ping Bing Zuo, Harbin Institute of Technology, Shenzhen. MC: Man Hoi Lee
11:55 – 12:10	<b>Circumstellar Disks in Close Binaries: Prograde v.s. Retrograde</b> Xiaojia Zhang, The University of Hong Kong. MC: Man Hoi Lee
<b>12:15- 14:00</b>	<b>Buffet Lunch @W21-G019</b>

## Concurrent session 2: Atomic, Molecular and Optical Physics

27 July (Friday)

14:00 – 18:00	Concurrent session 2: Atomic, Molecular and Optical Physics
Venue:	Anthony Lau Building (E4), E4-1051
Chairpersons:	1. Hin-Lap Yip 2. Youtian Tao 3. Guichuan Xing
14:00 – 14:25	Keynote presentation
	<b>Microfluidics for artificial photosynthesis of carbohydrates</b> Xuming Zhang, The Hong Kong Polytechnic University. MC: Hin-Lap Yip
14:25 – 15:55	Invited presentations
14:25 – 14:40	<b>Fermi Liquid Properties for Weakly Repulsive p-wave Fermi Gases</b> Shanshan Ding, The University of Hong Kong. MC: Guichuan Xing
14:40 – 14:55	<b>High-performance SERS substrates: fabrication and applications</b> YanJun Liu, Southern University of Science and Technology. MC: Guichuan Xing
14:55 – 15:10	<b>Heavy Metal Containing Terpolymers for Polymer Solar Cells</b> Youtian Tao, Nanjing Tech University. MC: Guichuan Xing
15:10 – 15:25	<b>Test Lorentz invariance with trapped Yb<sup>+</sup> ions</b> Wu Bian, Sun Yat-Sen University. MC: Guichuan Xing
15:25 – 15:40	<b>Production of Ultracold Molecule with Zeeman Deceleration and Laser Catalyzed Reaction</b> Yang Liu, Sun Yat-Sen University. MC: Guichuan Xing
15:40 – 15:55	<b>Structural Phase Transition and Optical Property Investigation of Perovskite Crystal</b> Rui Chen, Southern University of Science and Technology. MC: Guichuan Xing
15:55 – 16:05	Contributed presentations
	<b>Dipolar collisions between ultracold NaRb molecules</b> Junyu He, The Chinese University of Hong Kong. MC: Guichuan Xing
16:05 – 16:25	Tea/coffee break, poster, discussion @E4 G/F Lobby
16:25 – 16:50	Keynote presentation
	<b>Lead halide perovskite based optoelectronic devices and their applications</b> Qinghai Song, Harbin Institute of Technology Shenzhen Graduate School. MC: Youtian Tao
16:50 – 17:50	Invited presentations
16:50 – 17:05	<b>All-dielectric valley photonic crystals: Paving the way to topological nanophotonics</b> Jian-Wen Dong, Sun Yat-Sen University. MC: Youtian Tao
17:05 – 17:20	<b>Structural Engineering of Graphene for Flexible and Ultrasensitive Mechanical Sensors</b> Xuchun Gui, Sun Yat-Sen University. MC: Youtian Tao
17:20 – 17:35	<b>Bright and Efficient Light-Emitting Diodes Based on Perovskite Quantum Dots</b> Kai Wang, Southern University of Science and Technology. MC: Youtian Tao
17:35 – 17:50	<b>Ultrafast Carrier Dynamics in few-Layer MoS<sub>2</sub></b> Zhaogang Nie, Guangdong University of Technology. MC: Youtian Tao
17:50 – 18:00	Contributed presentations
	<b>Persistent spin helix and its instability in spin-orbit coupled normal Bose gas</b> Wai Ho Tang, The University of Hong Kong. MC: Youtian Tao
18:05	Banquet Dinner @Oasis, Galaxy Macau (Bus pick-up point & time: E4 G/F Lobby @ 18:05 )

## 28 July (Saturday)

<b>09:00 – 12:00</b>	<b>Concurrent session 2: Atomic, Molecular and Optical Physics</b>
<b>Venue:</b>	<b>Anthony Lau Building (E4), E4-1051</b>
<b>Chairpersons:</b>	<b>1. Kai Wang 2. Yanjun Liu</b>
<b>09:00 – 09:25</b>	<b>Keynote presentation</b>
	<b>Exciton-Phonon Interaction in 2D Materials</b> Jun Zhang, Institute of Semiconductors, CAS. MC: Kai Wang
<b>09:25 – 10:10</b>	<b>Invited presentations</b>
09:25 – 09:40	<b>Highly Stable Low-Threshold Lasing in Ruddlesden-Popper Perovskite Microplatelets</b> Mingjie Li, Nanyang Technological University. MC: Kai Wang
09:40 – 09:55	<b>Strong light-matter interaction in perovskite microcavities</b> Qing Zhang, Peiking University. MC: Kai Wang
09:55 – 10:10	<b>Observation of parity-time symmetry breaking transitions in a dissipative system of ultracold atoms</b> Le Luo, Sun Yat-Sen University. MC: Kai Wang
<b>10:10 – 10:20</b>	<b>Contributed presentations</b>
	<b>Dielectrophoresis-actuated tunable optofluidic lenses for in-plane light manipulation</b> Qingming Chen, The Hong Kong Polytechnic University. MC: Kai Wang
10:20 – 10:40	Tea/coffee break, poster, discussion @E4 G/F Lobby
<b>10:40 – 11:05</b>	<b>Keynote presentation</b>
	<b>Acoustic spin-redirection geometric phase</b> Shubo Wang, City University of Hong Kong. MC: Yanjun Liu
<b>11:05 – 11:50</b>	<b>Invited presentations</b>
11:05 – 11:20	<b>Optical Design for Advanced Tandem and Semitransparent Polymer Solar Cells</b> Hin-Lap Yip, South China University of Technology. MC: Yanjun Liu
11:20 – 11:35	<b>3R MoS<sub>2</sub> with Broken Inversion Symmetry: A Promising Ultrathin Nonlinear Optical Device</b> Xinfeng Liu, National Center for Nanoscience and Technology. MC: Yanjun Liu
11:35 – 11:50	<b>Three-body recombination near a narrow Feshbach resonance in 6Li</b> Jiaming Li, Sun Yat-Sen University. MC: Yanjun Liu
<b>11:50 – 12:00</b>	<b>Contributed presentations</b>
	<b>Exitonic Excitation of a Superfluid Fermi Gas in a Double-layer Optical Lattice</b> Johnson Chan, The University of Hong Kong. MC: Yanjun Liu
<b>12:05 – 14:00</b>	<b>Buffet Lunch @W21-G019</b>

## Concurrent session 3: Biophysics and Soft Matter

27 July (Friday)

<b>14:00 – 18:10</b>	<b>Concurrent session 3: Biophysics and Soft Matter</b>
<b>Venue:</b>	<b>Anthony Lau Building (E4), E4-3054</b>
<b>Chairpersons:</b>	<b>1. Dan Li 2. Xuanjun Zhang 3. De-Fang Ouyang</b>
<b>14:00 – 14:25</b>	<b>Keynote presentation</b>
	<b>Chemopallet - A Strategy for Tuning Photoluminescence of Supramolecular Coordination Entities</b> Dan Li, Jinan University. MC: Xuanjun Zhang
<b>14:25 – 15:40</b>	<b>Invited presentations</b>
14:25 – 14:40	<b>Multifunctional fluorescent optical sensors for bioanalysis</b> Yanqing Tian, Southern University of Science and Technology, China. MC: Xuanjun Zhang
14:40 – 14:55	<b>Semiconducting Polymers for Biomedical Applications</b> Changfeng Wu, Southern University of Science and Technology, China. MC: Xuanjun Zhang
14:55 – 15:10	<b>Mechanism of contact between a droplet and a smooth substrate</b> Lei Xu, The Chinese University of Hong Kong. MC: Xuanjun Zhang
15:10 – 15:25	<b>Systems approach to complex human microbial networks</b> Pan-Jun Kim, Hong Kong Baptist University. MC: Xuanjun Zhang
15:25 – 15:40	<b>Human brain connectomics and microbiomics in schizophrenia</b> Kai Wu, South China University of Technology. MC: Xuanjun Zhang
<b>15:40 – 16:00</b>	<b>Contributed presentations</b>
15:40 – 15:50	<b>Modified interfacial force field for accurate representation of peptide adsorption free energy on self-assembled monolayer</b> Pratiti Bhadra, University of Macau. MC: Xuanjun Zhang
15:50 – 16:00	<b>Analysis of potential landscape of colloidal diffusion using the Markov state model</b> Chengjie Luo, Hong Kong University of Science and Technology. MC: Xuanjun Zhang
16:00 – 16:20	Tea/coffee break, poster, discussion @E4 G/F Lobby
<b>16:20 – 16:45</b>	<b>Keynote presentation</b>
	<b>The control of megakaryocyte and platelet formation</b> Mo Yang, South Medical University. MC: Dan Li
<b>16:45 – 17:30</b>	<b>Invited presentations</b>
16:45 – 17:00	<b>Dynamic basis of substrate permissiveness of a plant acyltransferase</b> Yi Wang, The Chinese University of Hong Kong. MC: Dan Li
17:00 – 17:15	<b>Photoacoustic imaging guided cancer theranostics</b> Yuan Zheng, University of Macau. MC: Dan Li
17:15 – 17:30	<b>A microcannon device for overcoming biological membrane barriers by powering nanoparticles</b> Gang Chen, Guangdong Pharmaceutical University. MC: Dan Li
<b>17:30 – 18:10</b>	<b>Contributed presentations</b>
17:30 – 17:40	<b>Phase separation of swimmers drives long-range fluid</b> Haoran Xu, The Chinese University of Hong Kong. MC: De-Fang Ouyang
17:40 – 17:50	<b>Modeling Predictive Information and Direction Selectivity in the Retina</b> Min Yan, Hong Kong University of Science and Technology. MC: De-Fang Ouyang
17:50 – 18:00	<b>The Link between Membrane Composition and Permeability to Drugs</b> Chi Hang Tse, The Chinese University of Hong Kong. MC: De-Fang Ouyang
18:00 – 18:10	<b>Transfer learning for the prediction of pharmacokinetic properties</b> Ye Zhuyifan, University of Macau. MC: De-Fang Ouyang
<b>18:15</b>	<b>Banquet Dinner @Oasis, Galaxy Macau (Bus pick-up point &amp; time: E4 G/F Lobby @ 18:15 )</b>

## 28 July (Saturday)

<b>09:00 – 12:00</b>	<b>Concurrent session 3: Biophysics and Soft Matter</b>
<b>Venue:</b>	<b>Anthony Lau Building (E4), E4-3054</b>
<b>Chairpersons:</b>	<b>1. De-Fang Ouyang 2. Ophelia K. C. Tsui 3. Zhengtao Xu</b>
<b>09:00 – 09:25</b>	<b>Keynote presentation</b>
	<b>Sulfur Chemistry and Linker Cyclization for Stable and Electroactive Metal-Organic Frameworks</b> Zhengtao Xu, City University of Hong Kong. MC: De-Fang Ouyang
<b>09:25 – 10:25</b>	<b>Invited presentations</b>
09:25 – 09:40	<b>Growth factor-binding biomaterials scaffolds for tissue repair</b> Chunming Wang, University of Macau. MC: Ophelia K. C. Tsui
09:40 – 09:55	<b>Functionality-Oriented DNA Material: Taking Advantage of Amplification Techniques</b> Leilei Tian, Southern University of Science and Technology, China. MC: Ophelia K. C. Tsui
09:55 – 10:10	<b>Single- and Two-Photon Non-Diffracting Light-Sheet Microscopy for Bioimaging</b> Shengwang Du, Hong Kong University of Science and Technology. MC: Ophelia K. C. Tsui
10:10 – 10:25	<b>Titania-Coated Gold Nanostructures for Blocking Autophagy Flux and Sensitizing Cancer Cells to Proteasome Inhibitor-Induced Death</b> Xiaoming Zhu, Macau University of Science and Technology. MC: Ophelia K. C. Tsui
<b>10:25 – 10:35</b>	<b>Contributed presentations</b>
	<b>Investigation molecular mechanism of cyclodextrin formulations</b> Zhao Qianqian, University of Macau. MC: Ophelia K. C. Tsui
10:35 – 10:55	Tea/coffee break, poster, discussion @E4 G/F Lobby
<b>10:55 – 11:20</b>	<b>Keynote presentation</b>
	<b>Transport Properties of Thin Polymer Liquid and Solid Films</b> Ophelia K. C. Tsui, Hong Kong University of Science and Technology. MC: Zhengtao Xu
<b>11:20 – 11:50</b>	<b>Invited presentations</b>
11:20 – 11:35	<b>High-throughput screening for identification of protein capture agents and proteomic profiling for disease biomarker discovery</b> Liqian Gao, School of Pharmaceutical Science (Shenzhen), Sun Yat-Sen University. MC: Zhengtao Xu
11:35 – 11:50	<b>Computational pharmaceutics</b> Defang Ouyang, University of Macau. MC: Zhengtao Xu
<b>11:50 – 12:00</b>	<b>Contributed presentations</b>
	<b>Pinning and depinning dynamics of a moving contact line over a disordered surface</b> Caishan Yan, Hong Kong University of Science and Technology. MC: Zhengtao Xu
<b>12:05 – 14:00</b>	<b>Buffet Lunch @W21-G019</b>



## Concurrent session 4: Condensed Matter Physics

27 July (Friday)

14:00 – 18:15	<b>Concurrent session 4: Condensed Matter Physics</b>
<b>Venue:</b>	<b>Anthony Lau Building (E4), E4-1052</b>
<b>Chairpersons:</b>	<b>1. Daoxin Yao 2. Wei Ji</b>
14:00 – 14:25	<b>Keynote presentation</b>
	<b>Role of interlayer coupling in tuning structural and magnetic properties of 2D few-layers</b> Wei Ji, Renmin University of China. MC: Daoxin Yao
14:25 – 16:10	<b>Invited presentations</b>
14:25 – 14:40	<b>Topological valley-chiral edge states of Lamb waves in elastic thin plates</b> Jun Mei, South China University of Technology. MC: Daoxin Yao
14:40 – 14:55	<b>Global phase diagram of doped-Mott insulator on honeycomb lattice: A Grassmann tensor product state approach</b> Zhengcheng Gu, The Chinese University of Hong Kong. MC: Daoxin Yao
14:55 – 15:10	<b>Bilayer graphene with Rashba spin-orbital coupling and staggered sublattice potentials: topological phase and topological zero-line mode</b> Ma Luo, Sun Yat-Sen University. MC: Daoxin Yao
15:10 – 15:25	<b>Gapless edge states of 2D symmetry-protected topological phases: field theories, lattice models, and numerics</b> Chenjie Wang, City University of Hong Kong. MC: Daoxin Yao
15:25 – 15:40	<b>Multi-scale Time Dependent Density Functional Theory for Field Electron Emission</b> Weiliang Wang, Sun Yat-Sen University. MC: Daoxin Yao
15:40 – 15:55	<b>Self-learning Monte Carlo method and cumulative update</b> Junwei Liu, Hong Kong University of Science and Technology. MC: Daoxin Yao
15:55 – 16:10	<b>Quantum transport in nano-devices</b> Bin Wang, Shenzhen University. MC: Daoxin Yao
16:10 – 16:30	Tea/coffee break, poster, discussion @E4 G/F Lobby
16:30 – 16:55	<b>Keynote presentation</b>
	<b>Intrinsic magnetoresistivity in three-dimensional Dirac materials</b> Shunqing Shen, The University of Hong Kong. MC: Wei Ji
16:55 – 17:55	<b>Invited presentations</b>
16:55 – 17:10	<b>Randomness induced spin-liquid-like phase in the spin-1/2 <math>J_1</math>-<math>J_2</math> triangular Heisenberg model</b> Hanqing Wu, Sun Yat-Sen University. MC: Wei Ji
17:10 – 17:25	<b>Generalized Thouless Pump: theory and experimental realization</b> Longwen Zhou, National University of Singapore. MC: Wei Ji
17:25 – 17:40	<b>Casimir forces between silicon micromechanical components</b> Hobun Chan, Hong Kong University of Science and Technology. MC: Wei Ji
17:40 – 17:55	<b>Microscopic piezoelectric theory and electromechanical coupling correlations in 2D piezoelectric crystals</b> Yunhua Wang, Sun Yat-Sen University. MC: Wei Ji
17:55 – 18:15	<b>Contributed presentations</b>
17:55 – 18:05	<b>Amines induced Lead based complex from MAPbI<sub>3</sub> Perovskite single crystal</b> Xiyuan Feng, University of Macau. MC: Wei Ji
18:05 – 18:15	<b>Field angle resolved magneto-resistance of the Ising superconductor NbSe<sub>2</sub></b> Jian Lyu, Hong Kong University of Science and Technology. MC: Wei Ji
18:20	<b>Banquet Dinner @Oasis, Galaxy Macau(Bus pick-up point &amp; time: E4 G/F Lobby @ 18:20 )</b>

## 28 July (Saturday)

<b>09:00 – 12:00</b>	<b>Concurrent session 4: Condensed Matter Physics</b>
<b>Venue:</b>	<b>Anthony Lau Building (E4), E4-1052</b>
<b>Chairpersons:</b>	<b>1. Weiqiang Chen 2. Guo Hong</b>
<b>09:00 – 09:25</b>	<b>Keynote presentation</b>
	<b>Chiral SDW and d + id superconductivity in the magic-angle twisted bilayer-graphene</b> Weiqiang Chen, Southern University of Science and Technology. MC: Guo Hong
<b>09:25 – 10:25</b>	<b>Invited presentations</b>
09:25 – 09:40	<b>Strain and codoping strategies in transition metal and rare earth metal doped Bi<sub>2</sub>Se<sub>3</sub></b> Junyi Zhu, The Chinese University of Hong Kong. MC: Guo Hong
09:40 – 09:55	<b>Raman evidence for dimerization and Mott collapse in <math>\alpha</math>-RuCl<sub>2</sub></b> Mingyuan Huang, Southern University of Science and Technology. MC: Guo Hong
09:55 – 10:10	<b>Multipole interactions in the molecular polarizabilities of water from ambient to high pressures</b> Ding Pan, Hong Kong University of Science and Technology. MC: Guo Hong
10:10 – 10:25	<b>Long range magnetic order stabilized by acceptors</b> Xiaodong Zhang, The Chinese University of Hong Kong. MC: Guo Hong
<b>10:25 – 10:35</b>	<b>Contributed presentations</b>
	<b>Aqueous carbon dioxide at extreme conditions by ab initio molecular dynamics</b> Nore Stolte, Hong Kong University of Science and Technology. MC: Guo Hong
10:35 – 10:55	Tea/coffee break, poster, discussion @E4 G/F Lobby
<b>10:55 – 11:40</b>	<b>Invited presentations</b>
10:55 – 11:10	<b>Multifunctional, 0D &amp; 1D Graphene aerogel-phase change material composites</b> Guo Hong, University of Macau. MC: Weiqiang Chen
11:10 – 11:25	<b>Exciton and valley dynamics in monolayer tungsten diselenide</b> Tengfei Yan, The University of Hong Kong. MC: Weiqiang Chen
11:25 – 11:40	<b>Optical selection rules for excitonic Rydberg series in the massive Dirac cones of hexagonal two-dimensional materials</b> Pu Gong, The University of Hong Kong. MC: Weiqiang Chen
<b>11:40 – 12:00</b>	<b>Contributed presentations</b>
11:40 – 11:50	<b>Enhancement of superconductivity on approaching the structural quantum critical point</b> Yiu Wing Cheung, The Chinese University of Hong Kong. MC: Weiqiang Chen
11:50 – 12:00	<b>Anisotropic two-gap superconductivity and the absence of a Pauli paramagnetic limit in single-crystalline LaO<sub>0.5</sub>Fo<sub>0.5</sub>BiS<sub>2</sub></b> Yuet Ching Chan, The Chinese University of Hong Kong. MC: Weiqiang Chen
<b>12:05 – 14:00</b>	<b>Buffet Lunch @W21-G019</b>

## Concurrent session 5: Interdisciplinary Physics

27 July (Friday)

14:00 – 17:55	Concurrent session 5: Interdisciplinary Physics
Venue:	Anthony Lau Building (E4), E4-3053
Chairpersons:	1. Hui Pan 2. Yuan Cheng
14:00 – 14:25	Keynote presentation
	<b>Mechanical Properties of Silkworm Silk and its Applications</b> Yuan Cheng, Institute of High Performance Computing. MC: Hui Pan
14:25 – 15:40	Invited presentations
14:25 – 14:40	<b>Multifunctional materials based on cellulose</b> Haisong Qi, South China University of Technology. MC: Hui Pan
14:40 – 14:55	<b>Preparation, Structures, Properties of Natural Wood Fibrous Composite Materials: From Micron to Nanoscale</b> Detao Liu, South China University of Technology. MC: Hui Pan
14:55 – 15:10	<b>Structural engineering pseudocapacitive performance of spinel cobaltite <math>\text{MCo}_2\text{O}_4</math> (M = Mn, Ni, Cu, and Co)</b> Kwun Nam Hui, University of Macau. MC: Hui Pan
15:10 – 15:25	<b>Efficiency Boost of Inverted Quantum Dot Light Emitting Diodes by Thermal Damage Suppression Using an HAT-CN Interlayer</b> Shuangpeng Wang, University of Macau. MC: Hui Pan
15:25 – 15:40	<b>Solution-Controlled Fabrication of Wrinkled Graphene for Chemical and Mechanical Detection</b> Wenjun Chen, Sun Yat-Sen University. MC: Hui Pan
15:40 – 15:50	Contributed presentations
	<b>Hong Kong Housing Price Forecasting: a Gaussian Process Approach</b> Juntao Wang, Hong Kong University of Science and Technology. MC: Hui Pan
15:50 – 16:20	Tea/coffee break, poster, discussion @E4 G/F Lobby
16:20 – 16:45	Keynote presentation
	<b>Metastable Nano Alloys for Hydrogen Storage</b> Huaiyu Shao, University of Macau. MC: Yuan Cheng
16:45 – 17:45	Invited presentations
16:45 – 17:00	<b>Design of 2D Nanostructures as Catalysts for Hydrogen Production</b> Mengmeng Shao, University of Macau. MC: Yuan Cheng
17:00 – 17:15	<b>Manipulation of Micro-drops on Deformable Superhydrophobic Platform enabled via Magnetic Actuation</b> Binpu Zhou, University of Macau. MC: Yuan Cheng
17:15 – 17:30	<b>The relation of sorptivity and capillary coefficient for water transport in mortar</b> Yunsheng Zhang, Southeast University. MC: Yuan Cheng
17:30 – 17:45	<b>Current status, challenges and opportunities of teaching physics in Sino-French nuclear engineering institute</b> Kan Lai, Sun Yat-Sen University. MC: Yuan Cheng
17:45 – 17:55	Contributed presentations
	<b>Measuring the Scale of Congestion from Basic Quantities</b> Tat Shing Choi, Hong Kong University of Science and Technology. MC: Yuan Cheng
18:00	Banquet Dinner @Oasis, Galaxy Macau (Bus pick-up point & time: E4 G/F Lobby @ 18:00 )

## Concurrent session 6-1: Materials Physics and Engineering

27 July (Friday)

14:00 – 17:50	<b>Concurrent session 6-1: Materials Physics and Engineering</b>
<b>Venue:</b>	<b>Anthony Lau Building (E4), E4-3062</b>
<b>Chairpersons:</b>	<b>1. Changwen Miao 2. Zongjin Li</b>
14:00 – 14:35	<b>Keynote presentation</b>
	<b>Micromechanical Modeling of Strain Hardening Cementitious Composites</b> Christopher K Leung, The Hong Kong University of Science and Technology. MC: Changwen Miao
14:35 – 15:35	<b>Invited presentations</b>
14:35 – 14:55	<b>The relation of sorptivity and capillary coefficient for water transport in mortar</b> Yunsheng Zhang, Southeast University. MC: Changwen Miao
14:55 – 15:15	<b>Application of embedded piezoelectric transducers in concrete</b> Dongyu Xu, University of Jinan. MC: Changwen Miao
15:15 – 15:35	<b>How to effectively use graphene oxide to reinforce cementitious composites</b> Zeyu Lu, The Hong Kong University of Science and Technology. MC: Changwen Miao
16:00 – 16:30	Tea/coffee break, poster, discussion @E4 G/F Lobby
16:30 – 17:50	<b>Invited presentations</b>
16:30 – 16:50	<b>Development of low drying shrinkage foamed concrete</b> Kaitai Wan, Brunel University London. MC: Zongjin Li
16:50 – 17:10	<b>Flaw characterization and correlation with cracking strength in SHCC</b> Cong Lu, Southeast University. MC: Zongjin Li
17:10 – 17:30	<b>Development of structural-functional integrated energy storage concrete with innovative macro-encapsulated PCM</b> Haibin Yang, Shenzhen University. MC: Zongjin Li
17:30 – 17:50	<b>Engineering properties of Pb contaminated clay with nZVI treatment</b> Wanhuan Zhou, University of Macau. MC: Zongjin Li
18:00	<b>Banquet Dinner @Oasis, Galaxy Macau (Bus pick-up point &amp; time: E4 G/F Lobby @ 18:00)</b>

## 28 July (Saturday)

<b>09:00 – 12:00</b>	<b>Concurrent session 6-1: Materials Physics and Engineering</b>
<b>Venue:</b>	<b>Anthony Lau Building (E4), E4-3062</b>
<b>Chairpersons:</b>	<b>1. Guoxing Sun    2. Wanhuan Zhou</b>
<b>09:00 – 09:35</b>	<b>Keynote presentation</b>
	<b>TBC</b> Caijun Shi, Hunan University. MC: Guoxing Sun
<b>09:35 – 10:35</b>	<b>Invited presentations</b>
09:35 – 09:55	<b>Biomimetic superhydrophobic surface of concrete: Topographic and chemical modification by a direct spray method</b> Wei She, Southeast University. MC: Guoxing Sun
09:55 – 10:15	<b>Influence of concrete micro-dispersant on cement hydration</b> Yanfeng Zuo, Institute of Building Materials Technology Information. MC: Guoxing Sun
10:15 – 10:35	<b>Transportation model of calcium silicate hydrate in mesoscale: a molecular dynamic study</b> Ming Sun, The Hong Kong University of Science and Technology. MC: Guoxing Sun
10:35 – 11:00	Tea/coffee break, poster, discussion @E4 G/F Lobby
<b>11:00 – 12:00</b>	<b>Invited presentations</b>
11:00 – 11:20	<b>Effect of fly ash microsphere on the rheology and microstructure of alkali-activated fly ash/slag pastes</b> Tao Yang, Yancheng Institute of Technology. MC: Wanhuan Zhou
11:20 – 11:40	<b>Fire resistant eco concrete blocks containing waste glass</b> Binmeng Chen, Nano and Advanced Materials Institute Ltd. . MC: Wanhuan Zhou
11:40 – 12:00	<b>Application of nanocomposites in construction materials</b> Guoxing Sun, University of Macau. MC: Wanhuan Zhou
<b>12:05 - 14:00</b>	<b>Buffet Lunch @W21-G019</b>

## Concurrent session 6-2: Materials Physics and Engineering

27 July (Friday)

14:00 – 18:05	Concurrent session 6-2: Materials Physics and Engineering
Venue:	Anthony Lau Building (E4), E4-3055
Chairpersons:	1. Jensen Tsan Hang Li 2. Yinguo Xiao
14:00 – 14:30	Keynote presentation
	<b>Structural and magnetic properties of cathode materials studied by neutron scattering</b> Yinguo Xiao, Peking University Shenzhen Graduate School. MC: Jensen Tsan Hang Li
14:30 – 15:10	Invited presentations
14:30 – 14:50	<b>Characterizing collective structure distortions in functional materials using atomic-scale scanning transmission electron microscopy</b> Ye Zhu, The Hong Kong Polytechnic University. MC: Jensen Tsan Hang Li
14:50 – 15:10	<b>Advanced nanotechnology for photovoltaic devices</b> Feng Yan, The Hong Kong Polytechnic University. MC: Jensen Tsan Hang Li
15:10 – 15:55	Contributed presentations
15:10 – 15:25	<b>Stability of wurtzite semi-polar surfaces: algorithms and practices</b> Jingzhao Zhang, The Chinese University of Hong Kong. MC: Jensen Tsan Hang Li
15:25 – 15:40	<b>Improved optoelectronic properties and thermal stability of non-stoichiometric p-type NiO<sub>1+δ</sub> by copper doping</b> Kingsley Egbo, City University of Hong Kong. MC: Jensen Tsan Hang Li
15:40 – 15:55	<b>Electrochemical catalytic reactions of topological-insulator thin films</b> Qing Qu, Hong Kong University of Science and Technology. MC: Jensen Tsan Hang Li
16:00 – 16:30	Tea/coffee break, poster, discussion @E4 G/F Lobby
16:30 – 17:50	Invited presentations
16:30 – 16:50	<b>Non-Hermitian elastic metamaterials</b> Jensen Tsan Hang Li, Hong Kong University of Science and Technology. MC: Yinguo Xiao
16:50 – 17:10	<b>Nanocrystalline CoCrFeNiAl<sub>0.3</sub> high-entropy alloy thin film coating by magnetron sputtering</b> Weibing Liao, Shenzhen University. MC: Yinguo Xiao
17:10 – 17:30	<b>半导体和绝缘体的激光辅助场蒸发</b> Yu Xia, Sun Yat-Sen University. MC: Yinguo Xiao
17:30 – 17:50	<b>Realistic Floquet semimetal with exotic topological linkages between arbitrarily many nodal loops</b> Linhu Li, National University of Singapore. MC: Yinguo Xiao
17:50 – 18:05	Contributed presentations
	<b>Lattice-matched metastable Zinc-blende MnSe<sub>1-x</sub>Te<sub>x</sub> on ZnTe as a promising THz emitter material</b> Man Kit Cheng, Hong Kong University of Science and Technology. MC: Yinguo Xiao
18:10	Banquet Dinner @Oasis, Galaxy Macau (Bus pick-up point & time: E4 G/F Lobby @ 18:10 )

## 28 July (Saturday)

<b>09:00 – 11:50</b>	<b>Concurrent session 6-2: Materials Physics and Engineering</b>
<b>Venue:</b>	<b>Anthony Lau Building (E4), E4-3055</b>
<b>Chairpersons:</b>	<b>1. Lingmin Yao 2. Francis Chi-Chung Ling</b>
<b>09:00 – 09:25</b>	<b>Keynote presentation</b>
	<b>Reversible tuning of ferromagnetism, near band edge emission and resistive switching in Cu-doped ZnO film grown</b> Francis Chi-Chung Ling, The University of Hong Kong. MC: Lingmin Yao
<b>09:25 – 10:25</b>	<b>Invited presentations</b>
09:25 – 09:40	<b>Thermal transport manipulated by nanoscale interfacial engineering</b> Huashan Li, Sun Yat-Sen University. MC: Lingmin Yao
09:40 – 09:55	<b>Preparation and luminescent properties of <math>\text{Li}_{2.06}\text{Nb}_{0.18}\text{Ti}_{0.76}\text{O}_3</math>: <math>\text{Eu}^{3+}</math> phosphors</b> Qun Zeng, South China Normal University. MC: Lingmin Yao
09:55 – 10:10	<b>Fiber-based energy harvesting and storage devices for smart garments</b> Wenjie Mai, Jinan University. MC: Lingmin Yao
10:10 – 10:25	<b>Novel Design of Highly Oriented Titanate-based Nanorod Array and Its Application in Nanocomposite Capacitors</b> Lingmin Yao, Guangzhou University. MC: Lingmin Yao
<b>10:25 – 10:35</b>	<b>Contributed presentations</b>
	<b>Constructing a multichannel low-cost laser scanning microscope for luminescence and transmission/reflection imaging</b> Albert Wai Kit Lau, Hong Kong University of Science and Technology. MC: Lingmin Yao
10:35 – 11:00	Tea/coffee break, poster, discussion @E4 G/F Lobby
<b>11:00 – 11:20</b>	<b>Keynote presentation</b>
	<b>Neutron Spin excitations in superconducting <math>\text{Ba}(\text{Fe}_{0.926}\text{Co}_{0.074})_2\text{As}_2</math></b> Haifeng Li, University of Macau. MC: Francis Chi-Chung Ling
<b>11:20 – 11:50</b>	<b>Invited presentations</b>
11:20 – 11:35	<b>Fabrication of transparent <math>\text{Tb}_3\text{Al}_5\text{O}_{12}</math> ceramics by hot isostatic pressing sintering</b> Yinzhen Wang, South China Normal University. MC: Francis Chi-Chung Ling
11:35 – 11:50	<b>Approaching the capacity limit of lithium cobalt oxide in lithium ion batteries via lanthanum and aluminum doping</b> Qi Liu, City University of Hong Kong. MC: Francis Chi-Chung Ling
<b>11:55 – 14:00</b>	<b>Buffet Lunch @W21-G019</b>

## Concurrent session 7: Scattering, Particle, Nuclear & Plasma Physics

27 July (Friday)

14:00 – 18:00	Concurrent session 7: Scattering, Particle, Nuclear & Plasma Physics
Venue:	Anthony Lau Building (E4), E4-3056
Chairpersons:	1. Hui Liu 2. Jenny Hiu Ching Lee 3. Wei Wang
14:00 – 14:50	Keynote presentation
14:00 – 14:25	<b>Nuclear Structure and Correlations: From Stable to Unstable Nuclei</b> Jenny Hiu Ching Lee, The University of Hong Kong. MC: Hui Liu
14:25 – 14:50	<b>Higher order corrections to the Chiral Magnetic Effect</b> Hui Liu, Jinan University. MC: Jenny Hiu Ching Lee
14:50 – 15:35	Invited presentations
14:50 – 15:05	<b>Physics study with accelerator neutrino oscillation and scattering</b> Jian Tang, Sun Yat-Sen University. MC: Jenny Hiu Ching Lee
15:05 – 15:20	<b>Hadronic weak decay of the lightest charmed baryon</b> Fanrong Xu, Jinan University. MC: Jenny Hiu Ching Lee
15:20 – 15:35	<b>Beta-decay studies of extremely proton-rich nuclei from Mg to S</b> Xinxing Xu, The University of Hong Kong. MC: Jenny Hiu Ching Lee
15:35 – 16:05	Contributed presentations
15:35 – 15:45	<b>Shape coexistence in neutron-rich <math>^{69,71,73}\text{Co}</math> nuclei</b> Taras Lokotko, The University of Hong Kong. MC: Hui Liu
15:45 – 15:55	<b>Cluster structure of neutron-rich Beryllium isotopes</b> Pengjie Li, The University of Hong Kong. MC: Hui Liu
15:55 – 16:05	<b>Beta decay of <math>^{26}\text{P}</math></b> Pengfei Liang, The University of Hong Kong. MC: Hui Liu
16:05 – 16:30	Tea/coffee break, poster, discussion @E4 G/F Lobby
16:30 – 16:55	Keynote presentation
	<b>The High-Energy Physics Experiments in the Greater Bay Area</b> Wei Wang, Sun Yat-Sen University. MC: Hui Liu
16:55 – 17:40	Invited presentations
16:55 – 17:10	<b>Cosmic Inflation as a Particle Collider</b> Yi Wang, Hong Kong University of Science and Technology. MC: Wei Wang
17:10 – 17:25	<b>The potentials of reactor neutrino experiments</b> Steven (Chan-Fai) Wong, Sun Yat-Sen University. MC: Wei Wang
17:25 – 17:40	<b>Anomaly-free chiral fermions, neutrino masses, and Dark Matter</b> Chi-Fong Wong, Macau University of Science and Technology. MC: Wei Wang
17:40 – 18:00	Contributed presentations
17:40 – 17:50	<b><math>\beta</math>-delayed neutron emission of extremely neutron-rich nuclei relevant to A=130 r-process abundance peak</b> Jiajian Liu, The University of Hong Kong. MC: Wei Wang
17:50 – 18:00	<b>Leptoquark induced flavor changing decays of Z boson and top quark</b> Mingxian Wang, Jinan University. MC: Wei Wang
18:05	Banquet Dinner @Oasis, Galaxy Macau (Bus pick-up point & time: E4 G/F Lobby @ 18:05 )



## Concurrent session 8: Quantum & Statistical Physics

27 July (Friday)

14:00 – 18:05	<b>Concurrent session 8: Quantum &amp; Statistical Physics</b>
<b>Venue:</b>	<b>Anthony Lau Building (E4), E4-3063</b>
<b>Chairpersons:</b>	<b>1. Guanghui Hu 2. Huashan Li</b>
14:00 – 14:25	<b>Keynote presentation</b>
	<b>Complexity Science in a Quantum World</b> Mile Gu, Nanyang Technological University. MC: Guanghui Hu
14:25 – 15:40	<b>Invited presentations</b>
14:25 – 14:40	<b>Ultimate precision limit for quantum metrology</b> Haidong Yuan, The Chinese University of Hong Kong. MC: Guanghui Hu
14:40 – 14:55	<b>One-Shot Detection Limits of Quantum Illumination with Discrete Signals</b> Man-Hong Yung, Southern University of Science and Technology. MC: Guanghui Hu
14:55 – 15:10	<b>Simplified Gentlest Ascent Dynamics for Transition State with Application to Allen-Cahn in Presence of Shear</b> Xiang Zhou, City University of Hong Kong. MC: Guanghui Hu
15:10 – 15:25	<b>Density Functional Theory: Two Cases Study</b> Jingrun Chen, Soochow University. MC: Guanghui Hu
15:25 – 15:40	<b>An efficient steady-state solver for Boltzmann equation with applications to microflow simulation</b> Zhicheng Hu, Nanjing University of Aeronautics and Astronautics. MC: Guanghui Hu
15:40 – 16:00	<b>Contributed presentations</b>
15:40 – 15:50	<b>Optimal operation for the triple-quantum-dot spin qubits</b> Chengxian Zhang, City University of Hong Kong. MC: Guanghui Hu
15:50 – 16:00	<b>A tunable charge qubit based on barrier-controlled triple quantum dots</b> Guo Xuan Chan, City University of Hong Kong. MC: Guanghui Hu
16:00 – 16:30	Tea/coffee break, poster, discussion @E4 G/F Lobby
16:30 – 16:55	<b>Keynote presentation</b>
	<b>Gibbs partitions, Mittag Leffler functions and waiting time models</b> Lancelot F. JAMES, Hong Kong University of Sciences and Technology. MC: Huashan Li
16:55 – 17:55	<b>Invited presentations</b>
16:55 – 17:10	<b>On efficient numerical simulations of time-dependent density functional theory</b> Guanghui Hu, University of Macau. MC: Huashan Li
17:10 – 17:25	<b>Averaging principle for one dimensional stochastic Burgers equations</b> Xiaobin Sun, Jiangsu Normal University. MC: Huashan Li
17:25 – 17:40	<b>Asymptotics for stochastic reaction-diffusion equation driven by subordinate Brownian motion</b> Ran Wang, Wuhan University. MC: Huashan Li
17:40 – 17:55	<b>Topological states and cotranslational symmetry in strongly interacting multi-particle systems</b> Chaohong Li, Sun Yat-Sen University. MC: Huashan Li
17:55 – 18:05	<b>Contributed presentations</b>
	<b>Automatic spin-chain learning to explore quantum speed limit</b> Xiaoming Zhang, City University of Hong Kong. MC: Huashan Li
18:10	<b>Banquet Dinner @Oasis, Galaxy Macau (Bus pick-up point &amp; time: E4 G/F Lobby @ 18:10 )</b>

## 28 July (Saturday)

<b>09:00 – 12:05</b>	<b>Concurrent session 8: Quantum &amp; Statistical Physics</b>
<b>Venue:</b>	<b>Anthony Lau Building (E4), E4-3063</b>
<b>Chairpersons:</b>	<b>1. Lihu Xu 2. Chunxiong Zheng</b>
<b>09:00 – 09:50</b>	<b>Keynote presentation</b>
09:00 – 09:25	<b>Extended WKB analysis for the generalized Schrodinger equations in the semi-classical regime</b> Chunxiong Zheng, Tsinghua University. MC: Lihu Xu
09:25 – 09:50	<b>Quantum Monte Carlo study of Disordered Spin Systems</b> Daoxin Yao, Sun Yat-Sen University. MC: Lihu Xu
<b>09:50 – 10:20</b>	<b>Invited presentations</b>
09:50 – 10:05	<b>Approximation of heavy tailed distributions</b> Lihu Xu, University of Macau. MC: Chunxiong Zheng
10:05 – 10:20	<b>Integrated quantum interface of ion trap and parabolic mirror</b> Zhao Wang, Sun Yat-Sen University. MC: Chunxiong Zheng
<b>10:20 – 10:30</b>	<b>Contributed presentations</b>
	<b>Enhancing Synchronization Stability in Kuramoto Model in Complex Networks against Fluctuations by Optimal Resource Adjustment</b> Kin Yau Tsang, Hong Kong University of Science and Technology. MC: Chunxiong Zheng
10:30 – 10:50	Tea/coffee break, poster, discussion @E4 G/F Lobby
<b>10:50 – 11:15</b>	<b>Keynote presentation</b>
	<b>Multi-photon processes on superconducting qubit circuits</b> Hou Ian, University of Macau. MC: Lihu Xu
<b>11:15 – 11:45</b>	<b>Invited presentations</b>
11:15 – 11:30	<b>Entanglement detection by the uncertainty relation</b> Yuan-Yuan Zhao, Sun Yat-Sen University. MC: Lihu Xu
11:30 – 11:45	<b>Random Active Path Model of Deep Neural Networks with Diluted Binary Synapses</b> Haiping Huang, Sun Yat-Sen University. MC: Lihu Xu
<b>11:45 – 12:05</b>	<b>Contributed presentations</b>
11:45 – 11:55	<b>An efficient and adaptive finite element method for Kohn—Sham equation</b> Yang Kuang, University of Macau. MC: Lihu Xu
11:55 – 12:05	<b>An asymptotic-based adaptive finite element method for Kohn-Sham equation</b> Yedan Shen, University of Macau. MC: Lihu Xu
<b>12:10 – 14:00</b>	<b>Buffet Lunch @W21-G019</b>

## Poster program

Posters will be on display for the duration of the conference. Authors will be at their poster-board during tea/coffee breaks to discuss their research with interested delegates.

Poster board #	Poster title and author
P1	<b>The Wave-packet Impact on Active and Sterile Neutrino Oscillations in Reactor Neutrino Experiments</b> Steven (Chan-Fai) Wong, School of Physics, Sun Yat-Sen University.
P2	<b>Leptoquark induced flavor changing decays of Z boson and top quark</b> Sam Ming-Yin Wong* and Fanrong Xu, Jinan University.
P3	<b>An apparatus for studying Feshbach resonance in ultracold 6Li degenerate Fermi gas</b> Xiao Zhang, School of Physics and Astronomy, Sun Yat-Sen University.
P4	<b>A New Magnetic Field system for Studying Narrow Feshbach of ultracold 6Li Fermi Gases</b> Jianxiong Fang, School of Physics and Astronomy, Sun Yat-Sen University.
P5	<b>Optical path design for trapping <math>^{171}\text{Yb}^+</math> ions experiment</b> Tishuo Wang, School of Physics and Astronomy, Sun Yat-Sen University.
P6	<b>Frequency stabilization of 369 nm and 935 nm for trapping <math>^{171}\text{Yb}^+</math> ions</b> Jiangyong Hu, School of Physics and Astronomy, Sun Yat-Sen University.
P7	<b>Ion traps in harmonic and anharmonic potential</b> Xinxin Rao, School of Physics and Astronomy, Sun Yat-Sen University.
P8	<b>Conductance Switch on Molecular Wheels Induced by Electric Field and Controlled by Molecular Rotation</b> Xiaobo Li, Hong Kong Baptist University.
P9	<b>Benzo[d]thiazol-3-ium contained red emitting probe for peroxynitrite sensing</b> Jingyun Tan, University of Macau.
P10	<b>Machine learning with quantum computation</b> Long Hin Li, The University of Hong Kong.
P11	<b>Solar vapor desalination of seawater</b> Yangshi Jin*, Chu Leung Chan and Xuming Zhang, The Hong Kong Polytechnic University.
P12	<b>Investigation on Tin-based anode materials for <math>\text{Na}^+</math> ion battery by in-situ TEM</b> Cheuk Ho Chan* and Ji-Yan Dai, The Hong Kong Polytechnic University.
P13	<b>Hydrostatic pressure effect on <math>T_c</math> of <math>\text{Mo}_8\text{Ga}_{41}</math> up to 72 kbar</b> Wei Zhang <sup>1,*</sup> , King Yau Yip <sup>1</sup> , Yuet Ching Chan <sup>1</sup> , Chia Nung Kuo <sup>2</sup> , Chin Shan Lue <sup>2</sup> , Kwing To Lai <sup>1</sup> , and Swee Kuan Goh <sup>1</sup> 1. The Chinese University of Hong Kong 2. National Cheng Kung University
P14	<b>Formation and Coalescence of Binary Black Holes in Active Galactic Nuclei: I - Capture of Nuclear Cluster Stars by Accretion Disks</b> Xiaojia Zhang <sup>1,*</sup> , Zhuoxiao Wang <sup>2</sup> , Douglas N. C. Lin <sup>2,3,4</sup> , and Shude Mao <sup>2,4,5</sup> 1. The University of Hong Kong 2. Tsinghua University 3. University of California, Santa Cruz 4. National Astronomical Observatories of China 5. University of Manchester

Poster board #	Poster title and author
P15	<b>Bose Polarons in the Heteronuclear Bose-Bose Mixture</b> Lintao Li*, Zhichao Guo and Dajun Wang, The Chinese University of Hong Kong.
P16	<b>Realistic implementation of all-photonic quantum repeater</b> Ming Lai Chan, The University of Hong Kong.
P17	<b>Quantum droplet in a mixture of Rb-Na Bose-Einstein condensates</b> Zhichao Guo*, Lintao Li and Dajun Wang, The Chinese University of Hong Kong.
P18	<b>Exploration of the Energetic Material Ammonium Perchlorate at high pressures: Combined Raman Spectroscopy and X-ray Diffraction Study</b> Lei Kang and Qingguang Zeng, Wuyi University.
P19	<b>The scattering mechanism of ZnSnN<sub>2</sub></b> Xing-Min Cai, Bo Wang and Fan Ye, Shenzhen University.
P20	<b>MRT OBSERVATIONS ON H<sub>2</sub>12CO AND H<sub>2</sub>13CO TOWARD GALACTIC MOLECULAR CLOUDS</b> Yaoting Yan, Jiangshui Zhang and Christian Henkel, Guangzhou University.
P21	<b>Resolution criterion based on the nth-order derivative of the image that exceed the sparrow criterion</b> Yanming Gao and Xiangyang Yu, Sun Yat-Sen University.
P22	<b>Imaging through a thin scattering layer by wavelength-depth-matching method</b> Junpeng Xie, Sun Yat-Sen University.
P23	<b>Zero-Reflection effect Based on Graphene-dielectric Metamaterials</b> Wenyao Liang, South China University of Technology.
P24	<b>From Equilibrium to Wave Turbulence by Shaking in Holographic Superfluid</b> Shanquan Lan, Hong Liu, Yu Tian and Hongbao Zhang, Lingnan Normal University.
P25	<b>Joule-Thomson expansion of d-dimensional charged AdS black holes</b> Jie-Xiong Mo*, Gu-Qiang Li, Shan-Quan Lan and Xiao-Bao Xu, Lingnan Normal University.
P26	<b>Photocatalytic properties of Bi<sub>2</sub>O<sub>3</sub>/Bi<sub>2</sub>VO<sub>5.5</sub> laminated composite films</b> Wei Xie, Changwei Zou and Guiang Liu, Lingnan Normal University.
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