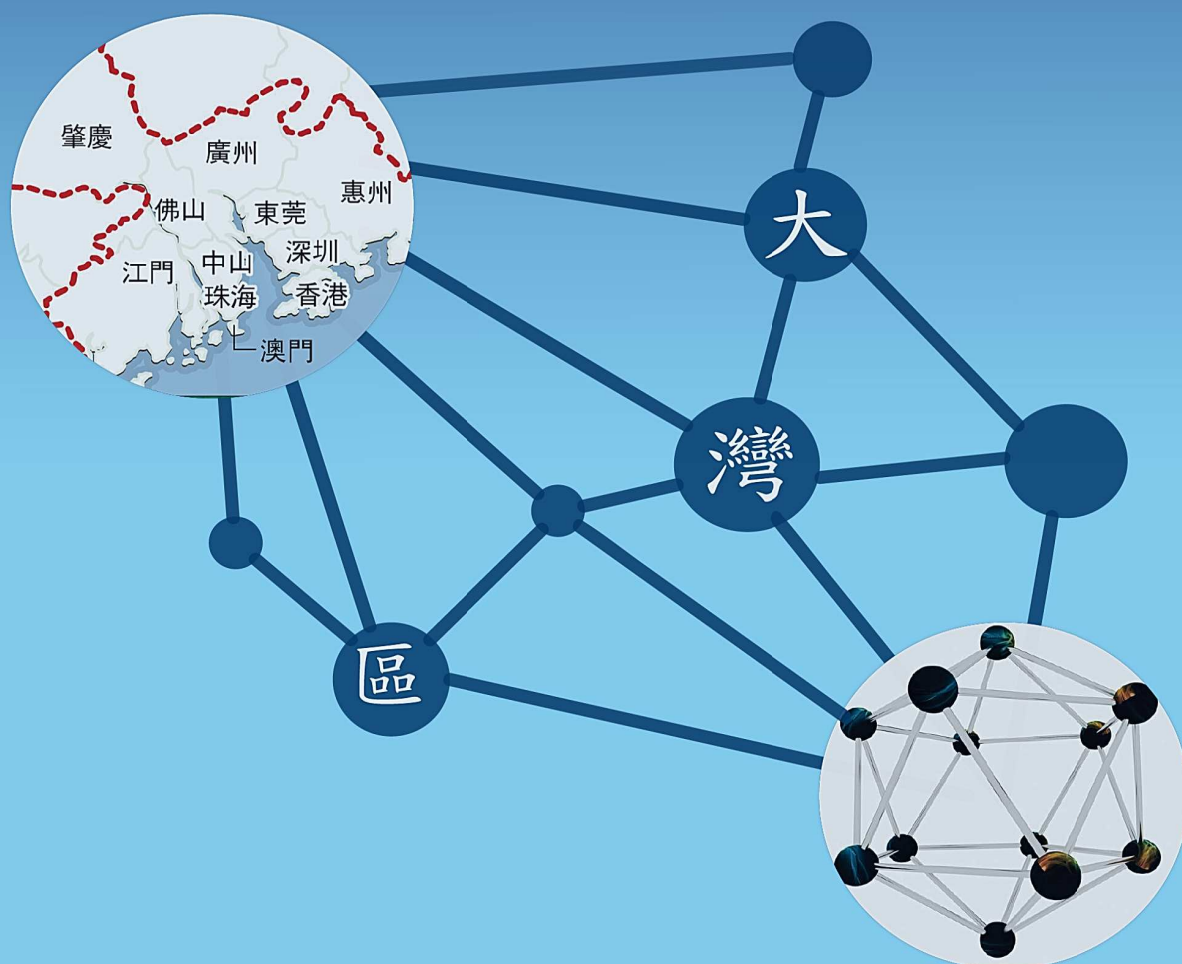


2018 Joint Annual Conference of Physical Societies in  
Guangdong—Hong Kong—Macao Greater Bay Area  
粵港澳大灣區物理學會2018聯合年會

26-29/07/2018

University of Macau 澳門大學

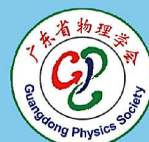


Organizers:

主辦單位



Physical Society  
of Hong Kong  
香港物理學會



澳門大學  
UNIVERSIDADE DE MACAU  
UNIVERSITY OF MACAU

## 26 July (Thursday)

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, University of Macau	N1-G008

## 27 July (Friday)

Time	Activity	Venue
09:00-09:15	<b>Opening Remarks</b> 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)		
09:20-09:50	<b>Photonics Beyond Diffraction Limit</b> By Prof. Xiang ZHANG, The University of Hong Kong	E4-G078
09:50-10:20	<b>When Big Data Meets Physics</b> By Prof. Lionel M. S. NI, University of Macau	
10:20-10:40	Coffee Break	E4 G/F Lobby
10:40-11:10	<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	Lunch Buffet	W21-G018
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
Dinner Banquet		
18:30-20:30	Bus pick-up point and departure time: <b>E4 G/F Lobby from 18:00-18:20</b>	Oasis, Galaxy Hotel

## 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	Lunch Buffet	W21-G018
13:00-14:00	Internal meeting of Guangdong Physics Society (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> <i>By Prof. Xin-Cheng XIE, Peking University</i>	E4-G078
14:30-15:00	<b>Quantum Transport in Dirac Semimetal-Superconductor Hybrid Devices</b> <i>By Prof. Dapeng YU, Southern University of Science and Technology</i>	
15:00-15:30	<b>Study on Improvement Technology for Durability of Concrete Under the Condition of Severe Environment</b> <i>By Prof. Changwen MIAO, Southeast University</i>	
15:30-16:00	<b>Binary Evolution and Its Applications</b> <i>By Prof. Zhanwen HAN, Chinese Academy of Sciences</i>	
16:00-16:30	Coffee Break / Poster Exhibition	E4 G/F Lobby
17:00-17:30	<b>誇克膠子新物質形態的硬探針信號及相關物理進展</b> <i>By Prof. Enke WANG, South China Normal University</i>	E4-G078
17:30-18:00	<b>China Spallation Neutron Source: A Rising Star on The Horizon for Neutron Scattering in China</b> <i>By Prof. Fangwei WANG, Chinese Academy of Sciences</i>	
18:00-18:10	<b>Closing Remarks</b> <i>Prof. Biao WANG, Sun Yat-Sen University</i>  <b>Best Poster Award Presentation</b>	

## 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	Concurrent session 1: Astrophysics and Astronomy
Venue:	Anthony Lau Building (E4), E4-3052
Chairpersons:	1. Kwing Lam Chan 2. Tao Cai
14:00 – 14:25	Keynote presentation
	<b>Convective Dynamics of Gaseous Planets</b> Kwing Lam Chan, Macau University of Science and Technology. MC: Tao Cai
14:25 – 15:55	Invited presentations
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>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: 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 @E4 G/F Lobby
16:15 – 16:40	Keynote presentation
	<b>Multimessenger observations of a flaring blazar coincident with a high-energy neutrino</b> Pablo M. Saz Parkinson, The University of Hong Kong. MC: Kwing Lam Chan
16:40 – 17:55	Invited presentations
16:40 – 16:55	<b>Energy Dissipation Processes in Solar Wind Turbulence</b> Yi Wang, Harbin Institute of Technology, Shenzhen. MC: Kwing Lam Chan
16:55 – 17:10	<b>What Can We Learn about Red Giants from Asteroseismology</b> Tao Wu, Yunnan Observatories, CAS. MC: Kwing Lam Chan
17:10 – 17:25	<b>Gamma-ray Burst Jet Breaks Revisited and GRB Observing Plan</b> Xiang-Gao Wang, Guangxi University. MC: Kwing Lam Chan
17:25 – 17:40	<b>Numerical Simulations of Efficient Turbulent Convection</b> Tao Cai, Macau University of Science and Technology. MC: Kwing Lam Chan
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: Kwing Lam Chan
17:55 – 18:05	Contributed presentations
	<b>Searching for Soft Pulsars with the Fermi Large Area Telescope</b> Brent Limyansky, University of California. MC: Kwing Lam Chan
18:10	Dinner Banquet @Oasis, Galaxy Hotel (Bus pick-up point & time: E4 G/F Lobby @ 18:10 )

## 28 July (Saturday)

<b>09:00 – 11:55</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 – 11:55</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>Shock Acceleration with Focused Transport Model</b> Ping Bing Zuo, Harbin Institute of Technology, Shenzhen. MC: Man Hoi Lee
11:40 – 11:55	<b>Circumstellar Disks in Close Binaries: Prograde v.s. Retrograde</b> Xiaojia Zhang, The University of Hong Kong. MC: Man Hoi Lee
<b>12:00- 14:00</b>	<b>Lunch Buffet @W21-G018</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	Dinner Banquet @Oasis, Galaxy Hotel (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>Lunch Buffet @W21-G018</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>Dinner Banquet @Oasis, Galaxy Hotel (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 pharmaceuticals</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>Lunch Buffet @W21-G018</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 <math>\text{MAPbI}_3</math> 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 <math>\text{NbSe}_2</math></b> Jian Lyu, Hong Kong University of Science and Technology. MC: Wei Ji
18:20	<b>Dinner Banquet @Oasis, Galaxy Hotel(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>Lunch Buffet @W21-G018</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	Dinner Banquet @Oasis, Galaxy Hotel (Bus pick-up point & time: E4 G/F Lobby @ 18:00 )

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

27 July (Friday)

<b>14:00 – 17:50</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. Changwen Miao 2. Zongjin Li</b>
<b>14:00 – 14:35</b>	<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
<b>14:35 – 15:35</b>	<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
<b>16:30 – 17:50</b>	<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
<b>18:00</b>	<b>Dinner Banquet @Oasis, Galaxy Hotel (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>Numerical modeling of hydration and microstructure development of cement-based materials</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>Lunch Buffet @W21-G018</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>半導體和絕緣體的鐳射輔助場蒸發</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	Dinner Banquet @Oasis, Galaxy Hotel (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>Lunch Buffet @W21-G018</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	Dinner Banquet @Oasis, Galaxy Hotel (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>Dinner Banquet @Oasis, Galaxy Hotel (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>Lunch Buffet @W21-G018</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 H212CO AND H213CO 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.
P27	<b>Extraction of cluster ion beams and application in synthesis of few-layer graphene on Ni/SiO<sub>2</sub>/Si substrate</b> Zesong Wang, Rui Zhang, Canxin Tian, Changwei Zou and Dejun Fu, Lingnan Normal University.
P28	<b>Synthesis and Microwave Absorption Enhancement of Yolk-Shell Carbon Microspheres</b> Chunhua Tian and Jun Quan*, Lingnan Normal University.
P29	<b>Chaoticons in highly nonlocal nonlinear optical media</b> Lanhua Zhong, Lingnan Normal University.
P30	<b>Microscopic piezoelectric theory of symmetry-broken sp<sup>2</sup>-bonded hexagonal 2D crystals</b> Zongtan Wang, Yunhua Wang,* Jie Tan, Yulan Liu, and Biao Wang,* Sun Yat-Sen University
P31	<b>High-sensitivity topological insulator strain sensor</b> Lingzhi Li, Yunhua Wang,* Zongtan Wang, Yulan Liu, and Biao Wang,* Sun Yat-Sen University
P32	<b>Measurement of microwave-induced strain in a metallic parallel-plate cavity</b> M. Wang <sup>1,2</sup> , S. Wang <sup>2</sup> , Q. Zhang <sup>1,2</sup> , C.T. Chan <sup>2</sup> , H.B. Chan <sup>1</sup> <sup>1</sup> Department of Physics, The Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong <sup>2</sup> William Mong Institute of Nano Science and Technology, The Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong, China
P33	<b>Searching for Soft Pulsars with the Fermi Large Area Telescope</b> Brent Limyansky and P. M. Saz Parkinson, The University of Hong Kong
P34	<b>THE CONNECTION BETWEEN THERMAL AND NON-THERMAL EMISSION IN GAMMA-RAY BURSTS: THERMAL COMPONENT IS UBIQUITOUS FOR THE PROMPT EMISSION PROCESS</b> Jing Lv, Guangxi University

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THANK YOU!

# 2018 Joint Annual Conference of Physical Societies in Guangdong-Hong Kong-Macao Greater Bay Area

## 免费澳门城市旅游精彩行程

(Sunday, 08:30 am – 12:30 pm, July 29, 2018)

【百变澳门-迷幻之都】澳门这个『东方拉斯韦加斯』、丰富的旅游资源令人刮目相看。穿梭于大街小巷、您随时能看到历史遗留下来的痕迹、仿佛置身欧洲南部小镇一般。著名的小吃令人垂涎。夜幕低垂、霓虹灯闪烁的大型酒店、娱乐场、夜总会处处林立、光影交织出神秘的面纱、迎接着您来”彻夜狂欢”！



大三巴



妈阁庙



金莲花广场



渔人码头



大三巴夜景



渔人码头

【大三巴牌坊】是圣保禄教堂的前壁遗迹，是澳门著名的名胜。教堂原本由一名意大利籍的耶稣会神父设计，由日本工匠以鬼斧神工的技术协助建成。1602 年奠基，1637 年全部竣工。这间教堂与火结下不解之缘，从其雏型起始，至现时仅存的前壁牌坊，先后经历三次大火，屡焚屡建，是一所活生生的历史见证。

【妈阁庙】是澳门最著名的名胜古迹之一，在至今已逾五百年，是澳门三大禅院中最古者。妈阁庙原称【妈祖阁】，在澳门东南方，俗称【天后庙】，建于一四八八年，正值明朝。背山面海，沿崖建筑，古木参天，风光优美。整座庙宇包括大殿、弘仁殿、观音阁等四座主要建筑，石狮镇门、飞檐凌空，是一座富有中国文化特色的古建筑。

【澳门渔人码头】是澳门首个以主题式设计的综合娱乐旅游新景点，总投资约达港币十九亿元。座落于外港新填海区海岸，占地超过 93,000 平方米，集娱乐、购物、饮食、酒店、游艇码头及会展设施于一体，结合不同建筑特色及中西文化，务求使游客突破地域界限，体验不同地区的感受。

【金莲花广场】1999 年 12 月 20 日，中华人民共和国恢复对澳门行使主权，并成立澳门特别行政区；中华人民共和国中央人民政府有见于这个国家(或是国际)级别的大事，因而向澳门致送了一尊名为“盛世莲花”的雕塑，分别大、小各一件，寓意澳门继续繁荣昌盛。这跟 1997 年香港主权移交时致送给香港特别行政区的永远盛开的紫荆花寓意一样。盛世莲花雕塑在 1999 年 12 月 17 日由工程人员安装在广场上；12 月 20 日中午由主管澳门事务的中华人民共和国国务院副总理钱其琛主持揭幕仪式。