

Scientific Program

Summer School (Day 1)

Morning, July 13, 2026

MA 505, Huairou Campus, IOP, CAS

Time	Speaker & Talk Title	Chair
09:00-09:10	Opening	
09:10-10:00	Takahiro Sakurai (The University of Osaka) Fundamentals of ESR and Development of High-pressure ESR Measurement Techniques	Jianlin Luo (Institute of Physics, Chinese Academy of Sciences)
10:00-10:50	Xiao Xue (Hefei National Laboratory) Quantum Computation with Spins in Silicon - Coherence, Integration and Scaling	
Break (10 minutes)		
11:00-11:50	Liming Chen (Shanghai Jiao Tong University) Enhanced Laser Driven Acceleration & Radiation for Nuclear Physics	Yutong Li (Institute of Physics, Chinese Academy of Sciences)
11:50-13:30	Lunch (Building X9, SECUF)	



Abstracts Collection - Summer School

Afternoon, July 13, 2025

M_A 505, Huairou Campus, IOP, CAS

Time	Speaker & Talk Title	Chair
13:30-14:00	Rui Zhou (Institute of Physics, Chinese Academy of Sciences) Overview on Physical Property Measurement Platform of SECUF	Jing Guo (Institute of Physics, Chinese Academy of Sciences)
14:00-14:15	Bosen Wang (Institute of Physics, Chinese Academy of Sciences) Superconductivity under Pressure in the 2D van der Waals Heavy-fermion Metal CeSiI	
14:15-14:30	Gang Li (Institute of Physics, Chinese Academy of Sciences) Low Temperature Physical Properties Measurements based on All-Superconducting High Field Magnet	
14:30-14:45	Rui Wu (Institute of Physics, Chinese Academy of Sciences) Unveiling Novel Quantum States with Ultralow-Temperature STM	
14:45-15:00	Xu Chen (Institute of Physics, Chinese Academy of Sciences) Introduction of the Sample Preselection and Characterization Station	
15:00-15:15	Jianyu Xie (Megabar Technology (Beijing) Limited CTO) How to Play Diamond Anvil Cell with Synergetic Extreme Conditions User Facility?	
Break (30 minutes)		
15:45-16:15	Shiyang Zhong (Institute of Physics, Chinese Academy of Sciences) An Introduction to the Ultrafast Dynamics and Imaging Platform	Hao Teng (Institute of Physics, Chinese Academy of Sciences)
16:15-16:30	Jun Li (Institute of Physics, Chinese Academy of Sciences) Tracking Non-Equilibrium Phase Transitions and Quantum Dynamics Using Advanced Ultrafast Electron Microscopy	
16:30-16:45	Shuo Dong (Institute of Physics, Chinese Academy of Sciences) 4D Tracking of Non-Equilibrium Dynamics	
16:45-17:00	Yifei Li (Institute of Physics, Chinese Academy of Sciences) Enhanced Inverse Compton Scattering via Spontaneous Focusing induced by Coated Plasma Mirror	
17:00-18:30	Dinner (Building X9, SECUF)	

Summer School (Day 2)

Morning, July 14, 2026

M_A 505, Huairou Campus, IOP, CAS

Time	Speaker & Talk Title	Chair
09:00-09:50	Zhirong Lin (Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences) An Introduction to Superconducting Electronics and Superconducting Quantum Computing	Guangtong Liu (Institute of Physics, Chinese Academy of Sciences)
09:50-10:40	Zhenzhong Shi (Soochow University) Thermal Transport and Thermoelectric Probes of Quantum Materials under Extreme Conditions	
Break (20 minutes)		
11:00-11:50	Shuxiang Xu (Center for High Pressure Science and Technology Advanced Research) Ultrafast Spectroscopy Investigation on Nickelate Superconductors	Xinbo Wang (Institute of Physics, Chinese Academy of Sciences)
11:50-13:30	Lunch (Building X9, SECUF)	

Afternoon, July 14, 2026

MA 505, Huairou Campus, IOP, CAS

Time	Speaker & Talk Title	Chair
13:30-14:00	Junya Feng (Institute of Physics, Chinese Academy of Sciences) Manipulation of Quantum States at Ultra-Low Temperatures	Jie Shen (Institute of Physics, Chinese Academy of Sciences)
14:00-14:15	Kai Xu (Institute of Physics, Chinese Academy of Sciences) Superconducting Quantum Computing and Quantum Simulation	
14:15-14:30	Ziwei Dou (Institute of Physics, Chinese Academy of Sciences) Exploring Novel Quantum Devices using Low Temperature Transport Techniques	
14:30-14:45	Peiling Li (Institute of Physics, Chinese Academy of Sciences) Research on van der Waals Devices for Low-temperature Electronic Applications	
14:45-15:00	Ruhao Pan (Institute of Physics, Chinese Academy of Sciences) Micro/Nano Fabrication Laboratory	
Break (15 minutes)		
15:15-15:45	Zhaodong Liu (Jilin University) In-advanced High-pressure and High-temperature Large-volume Press User facility and Multiple Applications	Liucheng Chen (Institute of Physics, Chinese Academy of Sciences)
Young Leader Report		
15:45-15:57	Bastien Michon (SOLEIL Synchrotron) Metallic Crossover through the Tilt-free Transition in La ₃ Ni ₂ O ₇ at High Pressure and Temperature	
15:57-16:09	Maksim Grebeniuk (Skolkovo Institute of Science and Technology) High-pressure Phase Stability and Superconductivity in La-Zr-H Hydrides	
16:09-16:21	Artem Posadskii (Lebedev Physical Institute of the Russian Academy of Sciences) Effective Action, Superfluid Density and Collective Modes in a Non-centrosymmetric Superconductor with Trigonal Symmetry	
16:21-16:33	Anastasia Lomonosova (Lebedev Physical Institute of the Russian Academy of Sciences) Single-gap Superconductivity of Ferroselenides with Isovalent Substitution	

Break (10 minutes)		
16:43-16:55	Sebasti3n Vidal Romero (Quantum Advanced Research Center) Unraveling Entanglement Growth and Dissipation in Periodically-kicked Quantum Batteries	Qingming Zhang (Institute of Physics, Chinese Academy of Sciences)
16:55-17:07	L. Ponvijayakanthan (PDPM Indian Institute of Information Technology) Inverse Design of Magneto-excitonic Semiconductors	
17:07-17:19	Tayyab Yahya (Tampere University) Polarization-entangled Spectral Vector Photons	
17:19-17:31	Yousra Ishfaq (Chulalongkorn University) Machine-Learning-Driven Discovery of Zinc Electrode Materials with DFT Validation	
17:31-17:43	Elizaveta Arkhipova (Ioffe Institute) Role of Magnon-magnon Interaction in Optical Excitation of Coherent Two-magnon Modes	
17:43-19:00	Dinner (Building X9, SECUF)	

Summer School (Day 3)

Morning, July 15, 2026

M_A 505, Huairou Campus, IOP, CAS

Time	Speaker & Talk Title	Chair
09:00-09:50	Jian Sun (Nanjing University) Machine Learning Driven Materials Simulation and Its Applications	Bosen Wang (Institute of Physics, Chinese Academy of Sciences)
09:50-10:40	Yizhou Liu (High Magnetic Field Laboratory, Chinese Academy of Sciences) Creation and Manipulation of Magnetic Hopfions	
Break (20 minutes)		
11:00-11:50	Cheng Jin (Nanjing University of Science and Technology) Generation of Attosecond Light Sources Based on High-Order Harmonic Generation in Gases and Their Control over Electron Dynamics	Shuo Dong (Institute of Physics, Chinese Academy of Sciences)
11:50-13:00	Lunch (Building X9, SECUF)	