



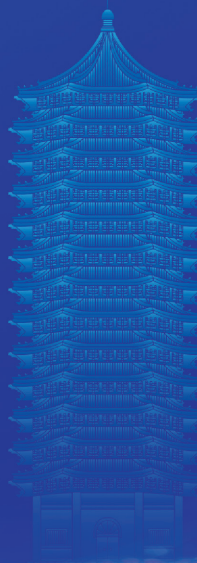
北京大学
PEKING UNIVERSITY

2026 International Workshop on Quantum Materials and Devices

Program

📅 August 22–23, 2026

📍 Peking University



Announcement

Dear Colleagues,

The “Quantum Materials and Devices” International Workshop will take place at **Peking University on August 22-23, 2026**. This workshop celebrates the 15th anniversary of the International Center for Quantum Materials (ICQM) at Peking University—the world’s first research center named after quantum materials. Founded in 2010 by Prof. Enge Wang and Prof. Xin-Cheng Xie, ICQM aims to advance research in the field of quantum materials, and we hope this symposium will inspire a broad vision for the future of quantum materials and quantum matter. The event will provide an opportunity to stimulate discussions, identify new opportunities, and promote collaborations.

Sincerely yours,
QMD Organizers

Committee

Jia, Shuang (ICQM, School of Physics, Peking University)
Jiang, Ying (ICQM, School of Physics, Peking University)
Liu, Yang (ICQM, School of Physics, Peking University)
Sun, Yi (ICQM, School of Physics, Peking University)
Wang, Jian (ICQM, School of Physics, Peking University)
Wu, Biao (ICQM, School of Physics, Peking University)
Xu, Limei (ICQM, School of Physics, Peking University)

Invited Guests and Speakers

Name	Affiliation
Berry, Michael	University of Bristol, UK
Chen, Xianhui	University of Science and Technology of China, China
Ding, Hong	Shanghai Jiao Tong University, China
Du, Rui-Rui	Peking University, China
Duan, Wenhui	Tsinghua University, China
Fang, Zhong	Institute of Physics, Chinese Academy of Sciences, China
Gao, Hongjun	Institute of Physics, Chinese Academy of Sciences, China
Gong, Xingao	Fudan University, China
Jain, Jainendra K.	Pennsylvania State University, USA
Jin, Kuijuan	Institute of Physics, Chinese Academy of Sciences, China
Lin, Haiqing	Zhejiang University, China
Ma, Yanming	Zhejiang University, China
Ma, Yuqiang	Nanjing University, China
Niu, Qian	University of Science and Technology of China, China
Pan, Jianwei	University of Science and Technology of China & Hefei National Laboratory, China
Scheffler, Matthias	The NOMAD Laboratory at BIFOLD, TU-Berlin, Germany
Sun, Changpu	Graduate School of China Academy of Engineering Physics, China
Von Klitzing, Klaus	Max Planck Institute for Solid State Research, Germany
Wang, Enge	Peking University, China
Wang, Yayu	Tsinghua University, China
Wang, Yupeng	Institute of Physics, Chinese Academy of Sciences, China
Wang, Ziqiang	Boston College, USA
Xiao, Yunfeng	Peking University, China
Xie, Xin-Cheng	Peking University, China
Yu, Dapeng	Peking University, China
Zhang, Fuchun	University of Chinese Academy of Sciences, China
Zhang, Jing	Shanxi University, China
Zhang, Zhenyu	University of Science and Technology of China, China
Zhou, Xingjiang	Institute of Physics, Chinese Academy of Sciences, China

Program

Registration 17:00 pm – 22:00 pm, Friday, August 21

August 22 (Sat.)

08:30- 08:40	○	Opening Ceremony
08:40 - 08:55	○	Ying Jiang
08:55 - 09:05	○	Photo
09:05-09:50	○	Klaus von Klitzing
09:50-10:20	○	Rui-Rui Du
10:20-10:40	○	Coffee Break
10:40-11:25	○	Jainendra K. Jain
11:25-11:55	○	Xin-Cheng Xie
11:55-13:30	○	Lunch Break
13:30-14:00	○	Ziqiang Wang
14:00-14:30	○	Hongjun Gao
14:30-15:00	○	Hong Ding
15:00-15:15	○	Jian Wang
15:15-15:25	○	Coffee Break
15:25-15:55	○	Changpu Sun
15:55-16:25	○	Xingao Gong
16:25-16:40	○	Ji Feng
16:40-16:55	○	Limei Xu
16:55-17:10	○	Xi Lin
17:10-17:25	○	Tingxin Li
17:25-17:40	○	Chenglong Zhang
18:00-20:00	○	Dinner



August 23 (Sun.)

08:30-09:15	Michael Berry
09:15-09:45	Qian Niu
09:45-10:00	Xiongjun Liu
10:00-10:15	Yu-An Chen
10:15-10:30	Ryuichi Shindou
10:30-10:40	Coffee Break
10:40-11:10	Xianhui Chen
11:10-11:25	Shuang Jia
11:25-11:40	Peng Gao
11:40-11:55	Xiaobo Lu
11:55-13:30	Lunch Break
13:30-14:00	Xingjiang Zhou
14:00-14:15	Fuchun Zhang
14:15-14:30	Yingying Peng
14:30-14:45	Ying Jiang
14:45-15:00	Yang Liu
15:00-15:40	Poster Session & Coffee Break
15:40-16:10	Matthias Scheffler
16:10-16:40	Zhenyu Zhang
16:40-16:55	Zhida Song
16:55-17:10	Xibo Zhang
17:10-17:25	Haiwen Liu
17:25-17:40	Qingdong Jiang
17:40-18:00	Closing Remarks
18:00	Leave for Banquet

Lunch: Second Floor of Yiyuan Restaurant, Zhongguanyuan Global Village

Buffet Reception: Yiyuan Restaurant

Banquet: The Lakeview Hotel

Venue:

August 22 (Morning)

Sunshine Hall, Yingjie Exchange Center, Peking University

北京大学英杰交流中心阳光厅

(北京市海淀区颐和园路 5 号, 北京大学)

(No.5 Yiheyuan Road, Haidian District, 100871 Beijing, China)

August 22 (Afternoon) & 23

Science Lecture Hall, Zhongguanyuan Global Village of PKU (Building 1)

北京大学中关村科学报告厅 (1 号楼)

(北京市海淀区中关村北大街 126 号, 北京大学中关村新园 1 号楼)

(No.126, Zhongguancun North Street, Haidian District, 100871 Beijing, China)

For more information about the workshop, please refer to the workshop website:

<https://conf.koushare.com/conf/qmd/>



August 22, 2026

Time	Speaker	Title
Chair: Ying Jiang		
08:30-08:35	Representative of the University Leadership <i>Peking University, China</i>	Opening
08:35-08:40	Enge Wang <i>Peking University, China</i>	Opening
Chair: Shuang Jia		
08:40-08:55	Ying Jiang <i>Peking University, China</i>	Introduction of ICQM
08:55-09:05	Photo	
Chair: Shuang Jia		
09:05-09:50	Klaus von Klitzing <i>Max Planck Institute for Solid State Research, Germany</i>	Quantum Hall Physics: From Foundations to Frontiers
09:50-10:20	Rui-Rui Du <i>Peking University, China</i>	Exploring Quantum Matters in Semiconductor Heterostructures
10:20-10:40	Coffee Break	
Chair: Jian Wang		
10:40-11:25	Jainendra K. Jain <i>Pennsylvania State University, USA</i>	Paired Composite Fermions
11:25-11:55	Xin-Cheng Xie <i>Peking University, China</i>	Dissipation Features in 2D Chiral Topological Superconductors
11:55-13:30	Lunch	
Chair: Xi Lin		
13:30-14:00	Ziqiang Wang <i>Boston College, USA</i>	Loop-Current Order in Kagome Metals and Superconductors
14:00-14:30	Hongjun Gao <i>nstitute of Physics, Chinese Academy of Sciences, China</i>	From Constructing Novel 2D Crystals to Majorana-Zero-Mode Observation
14:30-15:00	Hong Ding <i>Shanghai Jiao Tong University, China</i>	More is Different: The Beauty of Multiband in Fe-Based Superconductors
15:00-15:15	Jian Wang <i>Peking University, China</i>	Quantum Griffiths Singularity in Superconductors: A 10-Year Overview
15:15-15:25	Coffee Break	

Chair: Junren Shi

15:25-15:55	Changpu Sun <i>Graduate School of China Academy of Engineering Physics, China</i>	Physics For AI: A Renormalization-Group Approach For Reliability Safety Trade-off in Knowledge Distillation
15:55-16:25	Xingao Gong <i>Fudan University, China</i>	AI Physics: Making the Impossible Computable
16:25-16:40	Ji Feng <i>Peking University, China</i>	Ab Initio Spin Wave Dynamics without Spin Models
16:40-16:55	Limei Xu <i>Peking University, China</i>	Order behind Disorder
16:55-17:10	Xi Lin <i>Peking University, China</i>	Zero-Field Thermal Hall Effect in Insulator
17:10-17:25	Tingxin Li <i>Shanghai Jiao Tong University, China</i>	Fractional Topological Phases and Unconventional Superconductivity in Twisted MoTe_2
17:25-17:40	Chenglong Zhang <i>Institute of Physics, Chinese Academy of Sciences, China</i>	Unconventional Quantum Oscillations in ZrTe_5
18:00-20:00	Dinner (Yiyuan Restaurant)	

August 23, 2026

Time	Speaker	Title
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Chair: Ji Feng

08:30-09:15	Michael Berry <i>University of Bristol, UK</i>	Wave Trajectories, Quantum Potential, Superoscillations: Madelung, de Broglie, Newton
09:15-09:45	Qian Niu <i>University of Science and Technology of China, China</i>	Quantum Geometry in Linear and Nonlinear Responses
09:45-10:00	Xiongjun Liu <i>Peking University, China</i>	New critical states in hierarchal Moire lattices
10:00-10:15	Yu-An Chen <i>Peking University, China</i>	Low-Overhead Fault-Tolerant Topological Quantum Memory
10:15-10:30	Ryuichi Shindou <i>Peking University, China</i>	Topological Mechanism of Bose Glass Phase without Extrinsic Quenched Disorder
10:30-10:40	Coffee Break	

Chair: Limei Xu

10:40-11:10	Xianhui Chen <i>University of Science and Technology, China</i>	Exotic Charge-Density-Wave and Superconducting States in Vanadium-Based Kagome Superconductors CsV_3Sb_5
11:10-11:25	Shuang Jia <i>Peking University, China</i>	Giant anomalous Hall and Nernst effects in Ce-Based heavy fermion



11:25-11:40	Peng Gao <i>Peking University, China</i>	Probing Phonons and Visualizing Heat Transport at the Sub-Nanometer Scale
11:40-11:55	Xiaobo Lu <i>Peking University, China</i>	Fractionalization of High-Chern Insulator

11:55-13:30 Lunch

Chair: Shuang Jia

13:30-14:00	Xingjiang Zhou <i>Institute of Physics, Chinese Academy of Sciences, China</i>	Strong Electron Pairing along Fermi Pockets in High Temperature Cuprate Superconductors
14:00-14:15	Fuchun Zhang <i>University of Chinese Academy of Sciences, China</i>	Gossamer superconductivity in moire WSe ₂ bilayer
14:15-14:30	Yingying Peng <i>Peking University, China</i>	Revealing and Controlling Emergent Quantum Orders with Resonant and Ultrafast X-rays
14:30-14:45	Ying Jiang <i>Peking University, China</i>	Nuclear Quantum Effects: from Precision Measurement to Manipulation
14:45-15:00	Yang Liu <i>Peking University, China</i>	Bulk Current in Quantum Hall Effect

15:00-15:40 Poster Session & Coffee Break

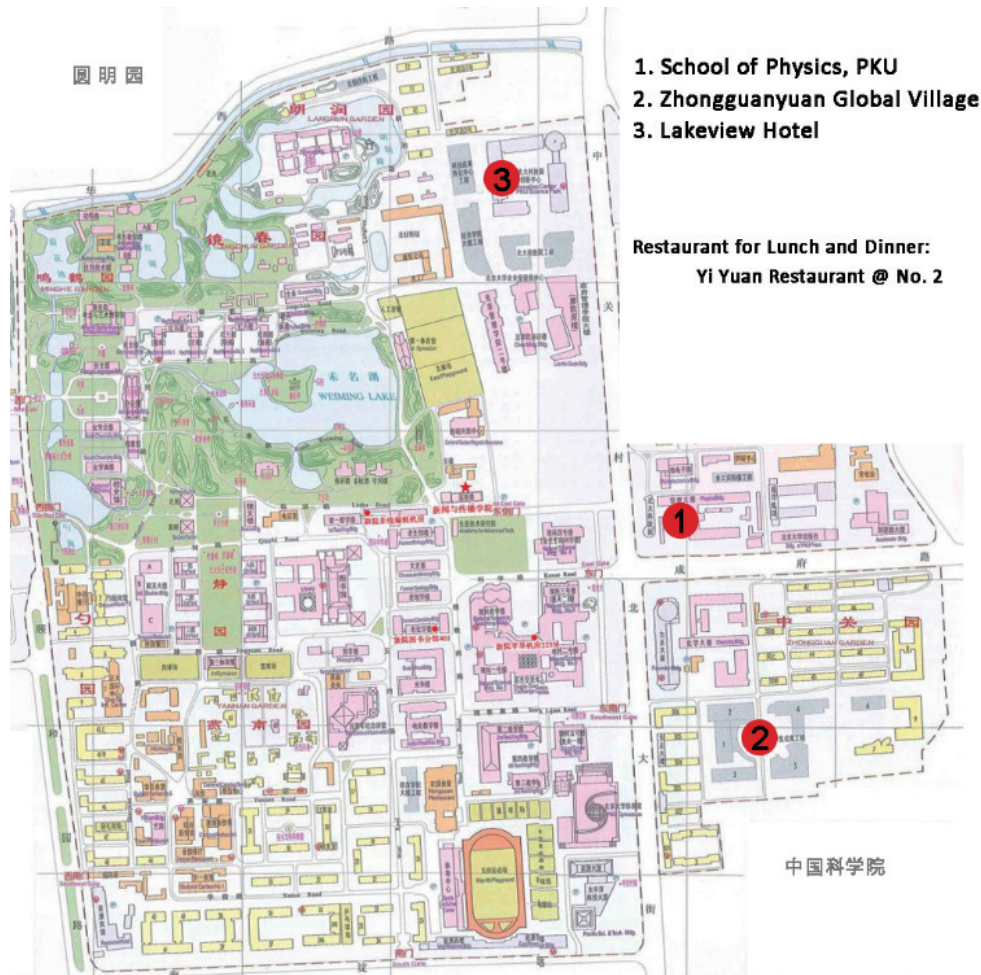
Chair: Biao Wu

15:40-16:10	Matthias Scheffler <i>The NOMAD Laboratory at BIFOLD, Germany</i>	Interpretable AI with Quantified Trust for the Discovery of Energy Materials
16:10-16:40	Zhenyu Zhang <i>University of Science and Technology of China, China</i>	Helicity and Chirality in Quantum Materials
16:40-16:55	Zhida Song <i>Peking University, China</i>	Pairing and Topology in Flat Bands
16:55-17:10	Xibo Zhang <i>Peking University, China</i>	E-17-Level ultra-stable laser based on a cryogenic silicon optical cavity and precision manipulation of cold atoms
17:10-17:25	Haiwen Liu <i>Beijing Normal University, China</i>	The Route of Random Process to Ultraslow Aging Phenomena
17:25-17:40	Qingdong Jiang <i>Shanghai Jiao Tong University, China</i>	Virtual Photons, Real Effects: The Rise of Cavity Quantum Materials
17:40-18:00	Qian Niu	Closing Remark

18:00-20:00 Banquet (The Lakeview Hotel)

Useful Information

University Campus:



Contact us:

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Zhongguanyuan Global Village of PKU (No.1 Building)
Address: No. 126, Zhongguancun North Street, Haidian District, 100871 Beijing, China.
(北京市海淀区中关村北大街 126 号, 北京大学中关村新园 1 号楼)

● How to connect the WIFI

If you have a temporary network account of Peking University, please refer to Plan A for connection setup, otherwise please refer to Plan B for settings.

Plan A.

1. Search for WIFI network signal 'Wireless PKU' and select it
2. Website: <https://its.pku.edu.cn/>
3. Input 'User Name' and 'Password' here:



The screenshot shows a login form for the Peking University campus network. It includes input fields for '校园卡号/邮箱' (Campus Card Number/Email) and '密码' (Password). A '忘记密码' (Forgot Password) link is next to the password field. Below these is a '收费地址' (Billing Address) field with a toggle switch. A red '连接' (Connect) button is present, with '(Connect)' written below it. At the bottom of the form are two buttons: '断开连接' (Disconnect) and '选择断开' (Select Disconnect). A message at the bottom says '欢迎使用北京大学校园网！' (Welcome to use Peking University campus network!).

Annotations on the right side of the form:

- ← User Name (points to the '校园卡号/邮箱' field)
- ← Password (points to the '密码' field)

4. Click 'Connect'

Plan B.

1. Search for WIFI network signal 'PKU Visitor' and select it
2. Website: <https://its.pku.edu.cn/>
3. Input 'cell phone No.' and 'verification code' here:



北京大学欢迎您

访客每次上网可连续使用2小时，每个手机每天最多可连接3次。

手机号

短信验证码

☐ 本人承诺遵守《中华人民共和国网络安全法》等国家有关法律、法规和行政规章制度。承诺遵守北京大学有关网络管理的相关规章制度。

← Input the domestic cell phone No., and click here.

← Enter the verification code received by the phone.

← Tick here

4. Then click 'Connect', then you can use the internet 6 hours every day for free.

About ICQM



Founded in 2010 as a flagship initiative of Peking University, the *International Center for Quantum Materials* (ICQM) is dedicated to advancing cutting-edge research in condensed matter physics and quantum materials, with the vision of becoming a global hub for interdisciplinary research and education. Strategically located in Beijing amid China's rapid technological development, ICQM combines state-of-the-art facilities with a modern academic framework centered on an independent principal investigator system and a rigorous tenure appraisal mechanism.

As of July 2026, ICQM's faculty comprises 4 Chair Professors, 15 tenured Full Professors, 8 tenured Associate Professors, and 6 tenure-track Assistant Professors. Among its senior researchers are 2 Members of the Chinese Academy of Sciences and 7 Fellows of the American Physical Society. The center actively recruits global talent while cultivating emerging scientists through robust training programs. To date, ICQM has appointed over 100 postdoctoral researchers, many of whom have made significant contributions to their respective fields. Currently, more than 200 students are enrolled in ICQM's graduate program, most of whom are top graduates from leading Chinese universities with outstanding academic records. ICQM provides its students with a vibrant scientific environment, encouraging them to explore a wide range of frontier research topics through diverse academic activities, including seminars, lectures, and summer schools.

Organized

by

International Center for Quantum Materials, PKU