

2026 年理论物理前沿讲习班——圈量子引力暑期学校通知

为促进圈量子引力领域的学术交流与人才培养，受国家自然科学基金委理论物理专款学术领导小组委托，圈量子引力 2026 (Loops'26) 暑期学校于 2026 年 5 月 10 日-22 日在中国扬州举办。讲习班受国家自然科学基金委理论物理专款资助，由扬州大学举办，浙江工业大学、湖南师范大学、运河城市大学联盟和世界运河历史文化城市合作组织协办。讲习班免收注册费，统一安排食宿，提供免费餐食，学员需自理住宿费、交通费。

暑期学校旨在为量子引力研究方向的学生与青年学者，系统介绍圈量子引力在正则与协变量化、量子黑洞、宇宙学等方面的基础理论与最新进展，重点涵盖近年来该领域取得的多项重要成果。暑期学校主页：<https://indico.global/event/15268/>。

时间地点

地点: 扬州华美达酒店瘦西湖店 (江苏省扬州市文昌中路 590 号)

报到: 2026 年 5 月 10 日 14:00-20:00; 酒店大堂;

课程: 2026 年 5 月 11-22 日; 酒店报告厅;

餐食: 酒店一楼餐厅**早餐凭酒店早餐券; 午餐和晚餐凭会议餐券**;

离会: 2026 年 5 月 23。

课程内容

基础课程

Yongge Ma & Xiangdong Zhang: Advanced General Relativity, Holonomy

Jinsong Yang: Quantum Mechanism Angular Momentum & Graphic Calculus

Yu Tian: Canonical & Path Integral Quantization of Field Theory and Renormalization

Yi Ling: Quantum Entanglement/Information

Xiaoning Wu: Asymptotic Symmetry

Hongguang Liu: Numeric Workshop

Madhaven Varadarajan: Functional Analysis & von Neumann/C* Algebra

Kristina Giesel: Canonical Quantization

Muxin Han: Spin Foam Quantization

Ivan Agullo: Quantum Field Theory in Curved Spacetimes

专题课程

Parampreet Singh: Loop Quantum Cosmology

Baofei Li: Modified Loop Quantum Cosmology

Cong Zhang: Effective Theory of Loop Quantum Black Holes: Covariant &
Different Gauge-fixing Approaches, Gravitational Collapse and
Black Hole Formation

组织架构

科学顾问委员会

Ronggen Cai (Co-chair)	Anzhong Wang (Co-chair)	Abhay Ashtekar
Bianca Dittrich	Alejandro Corichi	Beatriz Elizaga de Navascues
Jonathan Engle	Kristina Giesel	Viqar Husain Jiliang Jing
Wojciech Kaminski	Yi Ling	Etera Livine Yongge Ma
Guillermo Mena Marugan	Karim Noui	Daniele Oriti Jorge Pullin
Suvrat Raju	Carlo Rovelli	Hanno Sahlmann
Madhavan Varadarajan	Francesca Vidotto	Bin Wang

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Jinsong Yang	Xiangdong Zhang	Tao Zhu

扬州大学物理科学与技术学院
扬州大学引力与宇宙学研究中心

<https://cgc.yzu.edu.cn/>

2026年4月28日

Announcement of Loop Quantum Gravity summer school 26

To promote progress in Loop quantum gravity (LQG), Loops'26 summer school will be organized under the financial support by Special Fund for Theoretical Physics of the National Natural Science Foundation of China (NSFC), which will take place during May 10-22, 2026, at Yangzhou, China. The primary objective of this 14-day summer school is to provide students in the area of quantum gravity with an up-to-date introduction to the fundamentals of canonical and covariant LQG, quantum black holes, and cosmology, with an emphasis on the numerous novel results achieved within the field over the past years.

Loops'26 summer school is hosted by Yangzhou University, and co-organized by Zhejiang University of Technology, Hunan Normal University, the Canal-city University Cooperation Mechanism, and the World Historic and Cultural Canal Cities Cooperation Organization. The school is free of registration fee and will cover meals (dinner on 10/5-dinner on 22/5 in the hotel); however, the participants should cover their own travel and accommodation expenses. More information is in the webpage: <https://indico.global/event/15268/>.

Time and locations

Location: RAMADA hotel near the Slender West Lake;

Address: No.590 Wenchangzhong Road, Guangling District, Yangzhou, China;

Registration on-site: 14:00-20:00 on May 10 in the hotel lobby;

Lectures: May 11-22 in the multi-function hall in front of the hotel entrance;

Meals: Restaurant in the first floor of hotel ****breakfast with meal vouchers from the hotel; lunch and dinner with date-specific meal vouchers****;

Departure: May 23, 2026.

Lectures

Fundamentals

Yongge Ma & Xiangdong Zhang: Advanced General Relativity, Holonomy

Jinsong Yang: Quantum Mechanism Angular Momentum & Graphic Calculus

Yu Tian: Canonical & Path Integral Quantization of Field Theory and
Renormalization

Yi Ling: Quantum Entanglement/Information

Xiaoning Wu: Asymptotic Symmetry

Hongguang Liu: Numeric Workshop
Madhavan Varadarajan: Operator Algebra methods in LQG
Kristina Giesel: Canonical Quantization
Muxin Han: Spin Foam Quantization
Ivan Agullo: Field Theory in Curved Spacetimes

Special Topics

Parampreet Singh: Loop Quantum Cosmology
Baofei Li: Modified Loop Quantum Cosmology
Cong Zhang: Effective Theory of Loop Quantum Black Holes: Covariant
& Different Gauge-fixing Approaches, Gravitational Collapse and Black
Hole Formation

Scientific Advisory Committee

Ronggen Cai (Co-chair)	Anzhong Wang (Co-chair)	Abhay Ashtekar	
Bianca Dittrich	Alejandro Corichi	Beatriz Elizaga de Navascues	
Jonathan Engle	Kristina Giesel	Viqar Husain	Jiliang Jing
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Suvrat Raju	Carlo Rovelli	Hanno Sahlmann	
Madhavan Varadarajan	Francesca Vidotto	Bin Wang	

Local Organizing Committee

Xiaomei Kuang (chair)	Jianpin Wu (co-chair)	Yungui Gong (co-chair)
Wencong Gan	Gaoping Long	Puxun Wu
Jinsong Yang	Xiangdong Zhang	Tao Zhu

Center of gravity and cosmology
<https://cgc.yzu.edu.cn/>
College of Physical Science and Technology
Yangzhou University
28th, April, 2026