Conference Manual

NUSYS2026

The 6th NUclear physics School for Young Scientists

Aug. 9th - 16th, 2026

Beihang University, Beijing, China

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I. Introduction

* Background

The sixth “NUclear physics School for Young Scientists (NUSYS2026)” will be held at Beijing, China from August 9 to August 16, 2026（Registration on the 9th, departure on the 16th） hosted by Beihang University.

The goal of this school is to motivate the PhD students and postdoctoral/young researchers by introducing them to the various facets of the nuclear physics and its applications to the nuclear science and technology, as well as the future prospects of the forthcoming nuclear facilities in Asia.

Experts worldwide are invited to convey a view of the rich variety of present on-going activities in the field of experimental and theoretical nuclear physics and to exploit the opportunities created by the on-going or the next-generation nuclear physics facilities particularly in Asia, such as HIAF (High Intensity heavy-ion Accelerator Facility), JUNA (Jinping Underground Nuclear Astrophysics), SLEGS (Shanghai Laser Electron Gamma Source) and BISOL (Beijing Isotope-Separation On-Line neutron-rich beam facility) which are either operational or planned in China, RAON (Rare isotope Accelerator complex for ON-line experiment) in South Korea and RIBF (Radioactive Isotope Beam Factory) in Japan.

Each student is required to contribute by presenting a poster related to her/his work. The organizing committee together with invited lecturers will select the six best posters for the oral presentation session at the school, and three students will be awarded with “ANPhA Award for Young Scientists” and three for “NUSYS Award for Young Scientists”.

The school is jointly organized by Beihang University (BUAA), Beijing Normal University (BNU), Central China Normal University (CCNU),China Institute of Atomic Energy (CIAE), Fudan University (FDU), Institute of Modern Physics (IMP), Nanjing University (NJU), Peking University (PKU), Shanghai Jiao Tong University (SJTU) and Tsinghua University (THU).

* Committee

The School Master

Yanlin Ye(PKU)

Organizing Committee

Chen Ji (CCNU)
Hongna Liu (BNU)
Zhong Liu (IMP)
Yifei Niu (SJTU)
Baohua Sun (BUAA)
Yangping Shen (CIAE)
Xiaodong Tang (IMP)
Simin Wang (FDU)
Zhigang Xiao (THU)
Chang Xu (NJU)
Xiaofei Yang (PKU)

Local Organizing committee

Baohua Sun (BUAA)
Toshitaka Kajino (BUAA)
Jianwei Zhao (BUAA)
Yijie Wang (BUAA)

* Venue

Location

Chinese Address: 北京市海淀区学院路 37 号 北航柏彦大厦 6 层 彭桓武科教合作中心

English Address: **Peng Huanwu Collaborative Center for Research and Education, Baiyan Bldg. 6th floor, Beihang. Xueyuan Rd., Haidian District, Beijing**

The venue is located at Beihang University (Main Campus), which offers convenient transportation.

Weather Information

Early August is summer in Beijing, characterized by hot weather. The average weather conditions are as follows:

Daytime Temperature: Approx. 35°C to 38°C (95°F - 100°F)

Nighttime Temperature: Can drop to 19°C (66°F)

Rainfall: July and August are the months with concentrated rainfall in Beijing

Transportation Guide

Attendees can easily reach the venue via public transit or taxi. Convenient transportation connections are available from both airports and railway stations.

Estimated Taxi Fares

Beijing Capital International Airport (PEK): 100 - 150 RMB

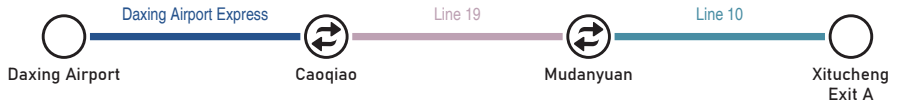
Beijing Daxing International Airport (PKX): 200 - 250 RMB

Railway Stations (Beijing South / Beijing West): Under 50 RMB

Public Transit Routes

To Baiyan Building (Venue) / Ji Hotel / Atour Hotel:

To Vision Hotel:



The map above shows the Xueyuan Road Campus of Beihang University, located at No. 37, Xueyuan Road, Haidian District, Beijing. The important locations and venues related to the school are marked.

For Chinese citizens, entry to the campus during the school period will be granted upon presentation of a valid PRC Resident Identity Card.

For international participants, please contact us in advance to obtain entry clearance.

II. Registration

• 10 a.m.–5 p.m. on Aug. 9, the 6th Floor of Baiyan Bldg.

Please note that if you arrive outside the registration hours, you can complete the registration at the lecture room the next day.

III. Schedule

• Time zone: Beijing Time (UTC/GMT +8).

Aug. 9 (Sunday)

14:00 – 17:00
Check in

Aug. 10 (Monday)

9:00 – 9:30 **Opening Address & Photo**
9:30 – 10:30 **Haozhao Liang**
Nuclear Structure Theory (NST)
10:30 – 10:50 **Coffee Break**
10:50 – 11:50 **Haozhao Liang**
Nuclear Structure Theory
11:50 – 12:10 **Discussion**

12:10 – 14:00 **Lunch**

14:00 – 15:00 **Hongna Liu**
Nuclear Structure Experiment (NSE)
15:00 – 15:20 **Coffee Break**
15:20 – 16:20 **Wei Wang**
Agentic Scientific Computing for Lattice QCD with some applications in Particle and Nuclear Physics
16:20 – 17:20 **Q&A**
Q&A for NST and NSE

17:30 – 20:00 **Set up Poster**

Aug. 11 (Tuesday)

9:00 – 10:00 **Hongna Liu**
Nuclear Structure Experiment
10:00 – 10:30 **Coffee Break**
10:30 – 11:30 **Hongna Liu**
Nuclear Structure Experiment
11:30 – 11:50 **Discussion**

11:50 – 14:00 **Lunch**

14:00 – 15:00 **Haozhao Liang**
Nuclear Structure Theory
15:00 – 15:20 **Coffee Break**
15:20 – 16:20 **Shiqian Ding**
A nuclear clock based on Th-229
16:20 – 17:20 **Q&A**
Q&A for NST and NSE
18:00 – 20:00 **Banquet**

Aug. 12 (Wednesday)

9:00 – 10:00 **Kouichi Hagino**
Nuclear Reaction Theory (NRT)
10:00 – 10:30 **Coffee Break & Photo**
10:30 – 11:30 **Kouichi Hagino**
Nuclear Reaction Theory
11:30 – 11:50 **Discussion**

11:50 – 14:00 **Lunch**

14:00 – 15:00 **Atsushi Tamii**
Nuclear Reaction Experiment (NRE)
15:00 – 15:20 **Coffee Break**
15:20 – 16:20 **Xiaopeng Zhou**
Neutron lifetime and a space based measurement method
16:20 – 17:20 **Q&A**
Q&A for NRT and NRE
17:30 – 20:00 **Poster**

Aug. 13 (Thursday)

9:00 – 11:50 **Poster**

11:50 – 14:00 **Lunch**

14:00 – 17:20 **Excursion**
Beijing Radioactive Ion-beam Facility & Beihang University

Aug. 14 (Friday)

9:00 – 10:00 **Atsushi Tamii**
Nuclear Reaction Experiment
10:00 – 10:30 **Coffee Break**
10:30 – 11:30 **Atsushi Tamii**
Nuclear Reaction Experiment
11:30 – 11:50 **Discussion**

11:50 – 14:00 **Lunch**

14:00 – 15:00 **Kouichi Hagino**
Nuclear Reaction Theory
15:00 – 15:20 **Coffee Break**

15:20 – 16:20 **Andreas Best**
Nuclear Astrophysics (NA)
16:20 – 17:20 **Q&A**
Q&A for NA and NRT

Aug. 15 (Saturday)

9:00 – 10:00 **Andreas Best**
Nuclear Astrophysics
10:00 – 10:30 **Coffee Break**
10:30 – 11:30 **Andreas Best**
Nuclear Astrophysics
10:30 – 11:50 **Q&A**
Q&A for NA

11:50 – 14:00 **Lunch**

14:00 – 17:20
Poster Presentations & Awarding Ceremony

17:20 – 17:30 **Closing**

IV. Introduction of Lecturers

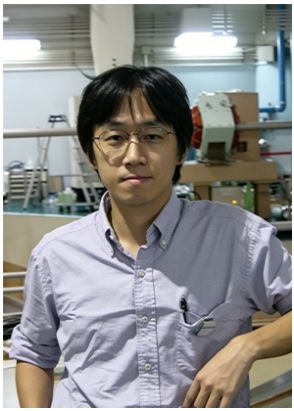
Prof. Andreas Christian Best is an experimental nuclear astrophysicist at the University of Naples Federico II and INFN Naples. He received his PhD from the University of Notre Dame in 2012, studying alpha-capture reactions on oxygen isotopes for the s-process. His career includes collaborations with Notre Dame, Ruhr University Bochum, INFN, and the LUNA facility at Gran Sasso. His research focuses on low-energy direct measurements of nuclear reactions relevant to stellar nucleosynthesis, particularly neutron-source reactions like $^{13}C(\alpha,n)^{16}O$ and $^{22}Ne(\alpha,n)^{25}Mg$. He also develops low-background detectors for underground experiments. He leads the ERC-funded SHADES project, which targets key neutron-source reactions at Gran Sasso. His work advances understanding of heavy-element origins and cosmic chemical evolution.

Prof. Shiqian Ding is an experimental physicist at Tsinghua University's Department of Physics. He received his PhD from the National University of Singapore in 2016, worked at JILA (2016–2021) with Prof. Jun Ye, and was a staff scientist at LMU Munich in 2021. He joined Tsinghua in 2021 and became Associate Professor in 2023. His research focuses on precision measurement, ultracold physics, and quantum coherent control, with current emphasis on developing a thorium-229 nuclear clock and advancing direct laser cooling of molecules. By combining techniques from atomic, molecular, and optical physics with nuclear spectroscopy, his work aims to enable new tests of fundamental physics and to explore novel quantum systems for both precision measurements and quantum science.

Prof. Kouichi Hagino is a theoretical nuclear physicist at Kyoto University's Graduate School of Science. He received his Doctor of Science from Tohoku University in 1998, with a thesis on multi-dimensional quantum tunneling in heavy-ion fusion. He previously held positions at Tohoku University, the University of Washington's Institute for Nuclear Theory, and the Yukawa Institute for Theoretical Physics at Kyoto University, before becoming a professor at Kyoto University in 2019. His research focuses on low-energy nuclear reaction theory and microscopic nuclear dynamics, with particular interests in heavy-ion fusion reactions, coupled-channels approaches, multi-dimensional tunneling, unstable nuclear structure, density functional theory, and nuclear astrophysics. His work aims to deepen theoretical understanding of nuclear reactions, exotic nuclei, and the formation of superheavy elements.

Prof. Haozhao Liang is a theoretical nuclear physicist at the University of Tokyo's Graduate School of Science, where he is an Associate Professor. He received his BSc and PhD from Peking University in 2005 and 2010. He previously held positions as a JSPS Fellow and tenured Senior Research Scientist at RIKEN, before joining the University of Tokyo. His research focuses on nuclear quantum many-body theory and its applications in nuclear physics, particle physics, and astrophysics, with particular interests in covariant density functional theory, nuclear spin-isospin excitations, and the structure of neutron-rich nuclei relevant to astrophysical r-process. He has published over 100 SCI papers, including in Physical Review Letters and Physics Reports, and received the IUPAP Young Scientist Prize in Nuclear Physics in 2016, the first Chinese-trained scholar to do so.

Prof. Hongna Liu is an experimental nuclear physicist at Beijing Normal University's School of Physics and Astronomy. She received her undergraduate degree from Lanzhou University in 2010 and completed her PhD at Peking University, with doctoral training at the RIKEN Nishina Center in Japan. She conducted postdoctoral research at KTH Royal Institute of Technology, CEA in France, and TU Darmstadt in Germany, before joining Beijing Normal University in 2022 as a recipient of a national young talent program. Her research focuses on experimental nuclear structure and reactions using rare-isotope beams, employing direct reactions, in-beam gamma-ray spectroscopy, and missing- or invariant-mass spectroscopy to study unstable nuclei and search for new phenomena far from stability. Her work contributes to understanding exotic nuclear structures and effective interactions in nuclei far from the valley of stability.



Prof. Atsushi Tamii is an experimental nuclear physicist at Osaka University’s Research Center for Nuclear Physics (RCNP), where he has been a Professor since 2022. He received his PhD from Kyoto University in 1999 and was a Research Associate at the University of Tokyo from 1998 to 2003 before joining RCNP in 2003. His research focuses on high-resolution nuclear-reaction measurements, particularly spin and isospin excitations in nuclei. He is known for developing zero-degree proton inelastic scattering techniques with the Grand Raiden spectrometer to study electric and magnetic dipole strengths, giant resonances, photonuclear reactions, and nuclear dipole polarizability. His work informs nuclear structure, the equation of state, neutron stars, nucleosynthesis, and astrophysical reactions.

Prof. Wei Wang is a theoretical particle physicist at Shanghai Jiao Tong University's School of Physics and Astronomy. He received his PhD from the Institute of High Energy Physics, CAS, in 2009. He held positions as an INFN Fellow at INFN Bari, a Humboldt Fellow at DESY, and a postdoctoral researcher at the University of Bonn, before joining Shanghai Jiao Tong University in 2014 as a Distinguished Research Fellow and becoming Professor in 2020. His research focuses on heavy-flavor physics, weak decays of heavy hadrons, quantum chromodynamics, CP violation, and collider phenomenology. He has made important contributions to the theoretical study of B-meson and charmed-hadron decays, parton physics, lattice QCD, and precision calculations for high-energy experiments such as LHCb. His work contributes to understanding strong interactions, flavor dynamics, and the internal structure and decay mechanisms of hadrons.

Prof. Xiaopeng Zhou is an experimental particle and nuclear physicist at Beihang University's School of Physics. He received his BSc in Nuclear Physics from Beihang University in 2013 and his PhD in Particle Physics and Nuclear Physics from Peking University in 2018. He then returned to Beihang as a postdoctoral researcher from 2018 to 2020, and is currently an Associate Professor and master's supervisor. His research focuses on experimental particle physics, nuclear physics, and rare-event searches, particularly direct dark matter detection. He has been deeply involved in the PandaX experiment, a leading underground liquid-xenon TPC dark matter project in China, analyzing data from PandaX-II and PandaX-4T to search for solar axions, neutrino magnetic moments, low-mass dark matter, and other new physics signals. He also works on detector calibration, low-background techniques, detector development, and neutrinoless double-beta decay studies. His research contributes to understanding dark matter, neutrino properties, and rare processes beyond the Standard Model.

V. School Information

Website:

- https://indico.ihep.ac.cn/event/187/

E-mail:

- ircbbc@buaa.edu.cn

Contact Person & Phone Number:

- Yijie Wang, 13661055897
- Jianwei Zhao, 15210968098

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VI. List of Participants

Name	Affiliation	Email
Bohan Zou	Beihang University	1914565021@qq.com
Zhiyang Zheng	Beihang University	zhengzy@buaa.edu.cn
Jinrong Liu	Beihang University	jinrongliu@buaa.edu.cn
Tianyu Wu	Beihang University	appassionata3@163.com
Kai Qian	Beihang University	2898292202@qq.com
Mingyuan Sun	Beihang University	by2419158@buaa.edu.cn
Yijing Chen	Beihang University	sy2419106@buaa.edu.cn
Danyang Li	Beihang University	danyangli@buaa.edu.cn
Yinji Chen	Fudan University	chenyinji@fudan.edu.cn
Wenxuan Zheng	University of York	wenxuan.zheng@york.ac.uk
Jingzhe Tang	Beihang University	by2519140@buaa.edu.cn
Di Sun	Beihang University	s15114284859@163.com
Junqi Li	Beihang University	20377252@buaa.edu.cn
Kaiyuan Wei	South China University of Technology	weikaiyuan123369@gmail.com
Simin Chen	South China University of Technology	2504726376@qq.com
Linqian Wu	Beihang University	1067844112@qq.com
Phan Long	Joint Institute of Nuclear Research & University of Science – Vietnam National University Ho Chi Minh City	pnhlong@hcmus.edu.vn
Yukun Yang	Beihang University	1802735415@qq.com
Simone Casci	Peking University	simone.casci@kuleuven.be
Zhaoxin Shen	Fudan University	zxshen24@m.fudan.edu.cn

Name	Affiliation	Email
Xin Zhang	Kyoto University	zhang.xin.38d@st.kyoto-u.ac.jp
Shuqian Peng	Beihang University	1548374041@qq.com
Chen Huang	Beihang University	hcphy@buaa.edu.cn
Zhiyong Lu	China Institute of Atomic Energy	liscklu@hotmail.com
Zixiao Zhang	Fudan University	21307110089@m.fudan.edu.cn
Bruna Goncalves	Beihang University	goncalves.r.bruna@gmail.com
Lu Liu	Beihang University	3164316493@qq.com
RuiYing Chen	Beihang University	rychen@buaa.edu.cn
Lingyi Fu	China Institute of Atomic Energy	fulinyi523@qq.com
Huiyan Li	China Institute of Atomic Energy	2892853289@qq.com
Yifan Liu	ShanghaiTech University	liuyf12023@shanghaitech.edu.cn
Jichao Zhang	RCNP, Osaka University	zhangjc@rcnp.osaka-u.ac.jp
Hanlin Wang	Tongji University	wanghanlin@tongji.edu.cn
Mark Povolotskiy	Flerov Laboratory of Nuclear Reactions, Joint Institute for Nuclear Research, Dubna, Russia	mark.povolotskiy@gmail.com
Zichen Luo	Tsinghua University	zichen.luo@gmail.com
Yongbeom Choi	Beihang University	ybchoi@buaa.edu.cn
Jinning Li	Peking University	lijinning@stu.pku.edu.cn
Mohammedelnazier Bakhiet	Yangzhou University	dh23014@stu.yzu.edu.cn
Shiyuan Zhou	China Institute of Atomic Energy	weishiqi177@gmail.com
Peilei Zuo	Beihang University	zuopl@buaa.edu.cn
Chenxu Wu	China Institute of Atomic Energy	chenxu2000_2022@163.com

Name	Affiliation	Email
Chen Zhang	Peking University	zhangch21@stu.pku.edu.cn
Yebin Wen	Beihang University	by2419138@buaa.edu.cn
Marhabo Beymamatova	New Uzbekistan University, Tashkent, Uzbekistan	m.beymamatova@newuu.uz
Xiaolu Qian	Fudan University	25210190026@m.fudan.edu.cn
Hongwei Huang	China Institute of Atomic Energy	1250089459@qq.com
Hongrui Feng	Beihang University	fenghr@buaa.edu.cn
Xinxin Qin	Beihang University	23191023@buaa.edu.cn
Xuan Wang	Institute of Modern Physics	wangx@impcas.ac.cn
Qian Wu	Beihang University	3258405132@qq.com
Guohao Li	Beihang University	liguohao@ihep.ac.cn

particles

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Journal Rank: JCR - Q2 (Physics, Nuclear) / CiteScore - Q2 (Physics and Astronomy (miscellaneous))

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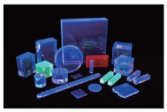

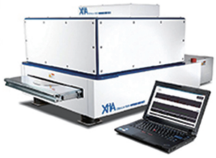

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Tel：010-88258670　010-88258671
Fax：(8610)88696193

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