About the Workshop

Since the discovery of the X(3872) by Belle in 2003, many XYZ and Pc states have been discovered over the past two decades. These intriguing states have reinvigorated the field of hadron spectroscopy. Anticipating the discovery of even more exotic hadrons in the near future, we aim to enhance collaboration and scientific activities. Following the series of international workshops on Hadron and Nuclear Physics (HNP2009-HNP2017) and the Nagoya Workshop on Exotic Hadrons in 2023, we are pleased to announce the ***East Asian Workshop on Exotic Hadrons 2024***, which will take place at Southeast University in Nanjing, China, from December 8th to 12th, 2024 (with December 8th for registration).

This workshop will focus on theoretical and experimental studies of exotic hadrons, including investigations into their structures, interactions, production, and decays. This workshop is jointly organized by Nanjing Normal University and Institute of Modern Physics, Chinese Academy of Sciences. This workshop is supported by Southern Center for Nuclear-Science Theory (SCNT), Institute of Modern Physics, Chinese Academy of Sciences.

International Organization Committee

Takumi Doi (RIKEN)

Li-Sheng Geng (Beihang University)

Feng-Kun Guo (ITP-CAS)

Masayasu Harada (Nagoya University)

Atsushi Hosaka (Osaka University)

Hyun-Chul Kim (Inha University)

Yongsun Kim (Sejong University)

Su Houng Lee (Yonsei University)

Xiang Liu (Lanzhou University)

Seung-il Nam (Pukyong National University)

Chengping Shen (Fudan University)

Denny Sombillo (University of the Philippines Diliman)

Qian Wang (South China Normal University)

Yasuhiro Yamaguchi (Nagoya University/KMI)

Yu-Peng Yan (Suranaree University of Technology)

Qiang Zhao (IHEP-CAS)

Shi-Lin Zhu (Peking University)

Bing-Song Zou (Tsinghua University)

Local Organizers

Dian-Yong Chen (Southeast University)

Hua-Xing Chen (Southeast University; hxchen@seu.edu.cn)

Bing-Ran He (Nanjing Normal University)

Zhun Lu (Southeast University)

Ju-Jun Xie (IMP-CAS; xiejujun@impcas.ac.cn)

Hai-Qing Zhou (Southeast University; zhouhq@seu.edu.cn)

Zhi-Yong Zhou (Southeast University)

Contact

Yue Lu (Southeast University): +86-15365073402

Ralated Information

1. Accommodation & Venue

Hilton Nanjing Niushoushan Hotel 南京牛首山希尔顿酒店

Address: No. 8 Ningdan Ave., Jiangning Dist. Jiangsu Province Nanjing, 211100 China

地址：南京市江宁区宁丹大道 8 号（江宁开发区）

Tel: +86 25 8711 8888

Website: Hilton Nanjing Niushou Mountain Resort

2. International travel to Nanjing

We shall try to pick up all the participants at the Nanjing Lukou International Airport (NKG) and the Nanjing South Railway Station (Nanjingnan Railway Station).

On the safe side, you can find your way to the taxi pick-up points at the airport if you just follow the signs 'taxi'. At the pick-up point, you can get a taxi and show the following address in Chinese to the taxi driver:

你好，我要去南京牛首山希尔顿酒店，需要发票，谢谢。

Hi, please take me to the Hilton Nanjing Niushoushan.

An invoice is required. Thanks.

3.Domestic travel to Nanjing (in Chinese)

1）乘坐飞机到达：南京禄口机场至南京牛首山希尔顿酒店

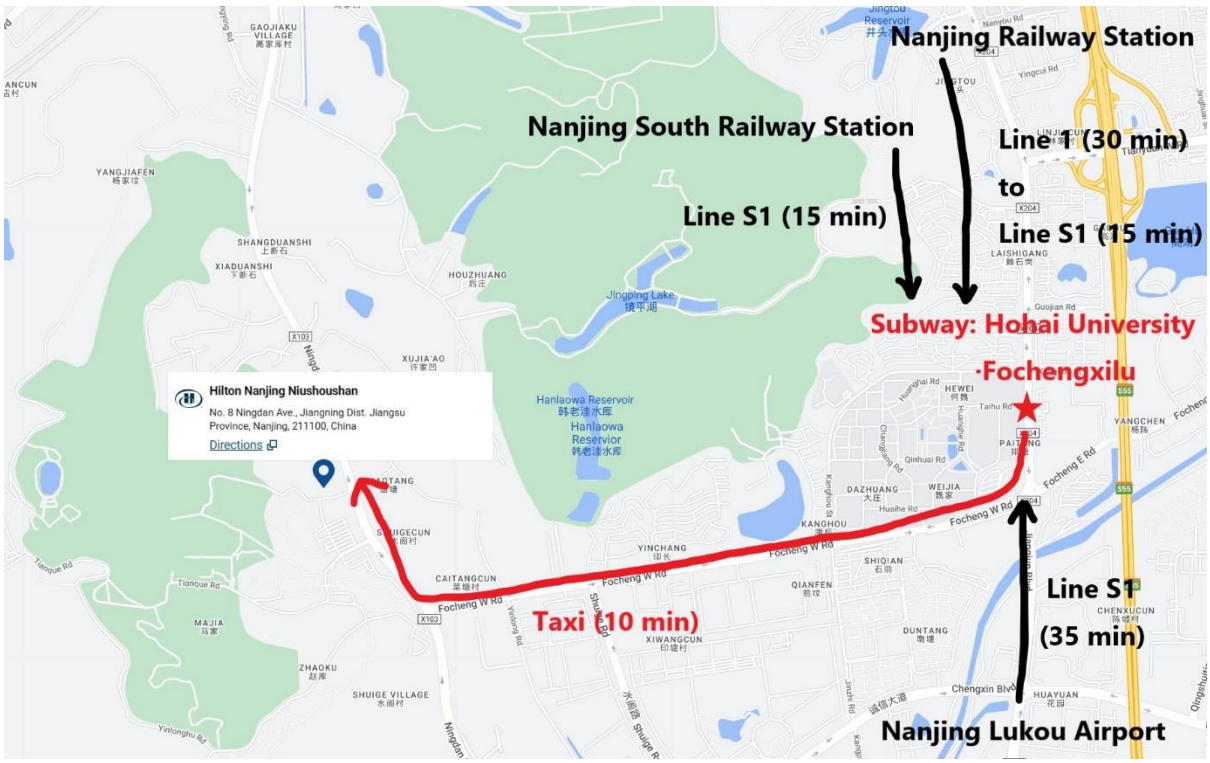
打车约 40 分钟，费用约 120 元；乘坐地铁约 45 分钟，乘坐 S1 号线（在禄口机场站上车，河海大学·佛城西路站下车），后打车至南京牛首山希尔顿酒店（约 10 分钟）。

2）乘坐火车到达：南京南站至南京牛首山希尔顿酒店

打车约 25 分钟，费用约 50 元；乘坐地铁约 30 分钟，乘坐 S1 号线（在南京南站上车，河海大学·佛城西路站下车），后打车至南京牛首山希尔顿酒店（约 10 分钟）。

3）乘坐火车到达：南京站至南京牛首山希尔顿酒店

打车约 40 分钟（高峰期会堵车），费用约 80 元；乘坐地铁约 60 分钟，乘坐 1 号线（在南京站上车）在南京南站转 S1 号线（河海大学·佛城西路站下车），后打车至南京牛首山希尔顿酒店（约 10 分钟）。



4. Registration

Time: December 7th & 8th, 9:00-21:00

Place: 4th floor of the Hilton Nanjing Niushoushan

The conference fee is 1500 RMB (about 200 USD), payable on-site. It covers lunches, dinners, the banquet, and excursions.

5. Breakfast, Lunches, and Dinners

Date	Breakfast	Lunch	Dinner
Dec 7th	6:30-9:00, 4th floor Cafeteria	11:30-14:00, 6th floor Vegetarian Restaurant	17:30-21:00, 6th floor Vegetarian Restaurant
Dec 8th	6:30-9:00, 4th floor Cafeteria	11:30-14:00, 6th floor Vegetarian Restaurant	18:00-20:00, 4th floor Cafeteria
Dec 9th	6:30-9:00, 4th floor Cafeteria	12:00-14:00, 4th floor Cafeteria	Banquet
Dec 10th	6:30-9:00, 4th floor Cafeteria	12:00-14:00, 4th floor Cafeteria	18:00-20:00, 4th floor Cafeteria
Dec 11th	6:30-9:00, 4th floor Cafeteria	12:00-14:00, 4th floor Cafeteria	18:00-20:00, 4th floor Cafeteria
Dec 12th	6:30-9:00, 4th floor Cafeteria	11:30-14:00, 6th floor Vegetarian Restaurant	17:30-21:00, 6th floor Vegetarian Restaurant

Note: Please collect the meal vouchers for the Vegetarian Restaurant upon check-in. There are two options available: a single-person set meal and a double-person set meal. No need to return.

6. Excursions

1) One-Day Excursion (subject to change due to weather conditions)

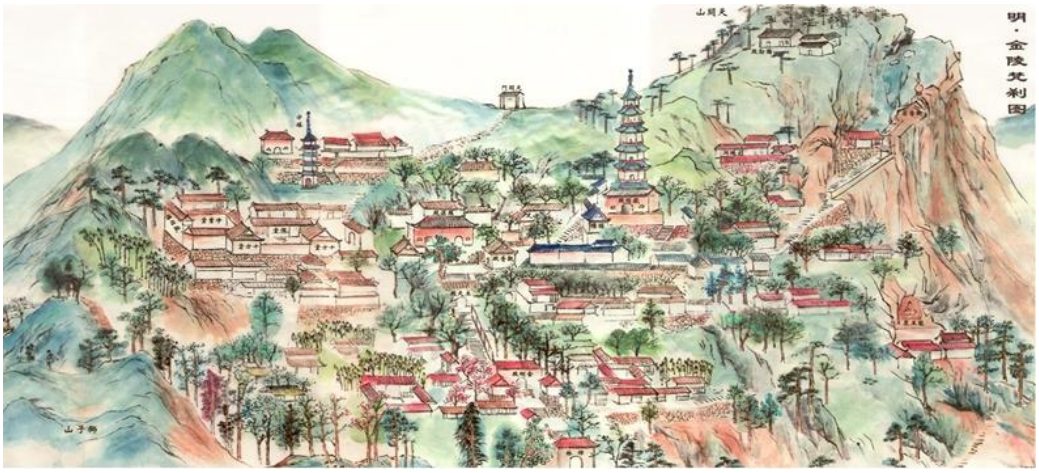
Time: December 8th, 8:30-18:30

Place: Ming Tomb Scenic Area, Zhonghua Gate, and Confucius Temple

2) Niushou Mountain

The Niushou Mountain is nearby our hotel. Tickets can be obtained at the registration desk, and participants may visit at any time. **If a participant does not use his/her ticket, please return it to us when you check out.**

Niushou Mountain is located in Jiangning District of Nanjing. The mountain twin peaks look like ox horns, hence the name. 1700 years ago, the first founder of the Eastern Jin Dynasty, emperor Yuandi, wanted to set up two magnificent gate towers to symbolize imperial power. However, Prime Minister, Wang Dao, considered it inappropriate to do so. One day, when they looked afar at the east and west peak of Niushou Mountain, the Minister suggested that the two peaks were the most suitable heavenly-made gate towers. Hence, the name Tianque Mountain.



7. Weather

Fri 6th	Sat 7th	Sun 8th	Mon 9th	Tue 10th	Wed 11th	Thu 12th	Fri 13th
15° 4°	13° 0°	10° -2°	12° 5°	11° 4°	11° 3°	11° 0°	12° -1°

Schedule

December 8th, Sunday	
9:00-18:00	Registration Hilton Nanjing Niushoushan Hotel
18:00-20:00	**Dinner**

December 9th, Monday			
Chair: Hua-Xing Chen			
8:30-8:45	Dian-Yong Chen	Opening speech	Southeast University
8:45-9:15	Craig Roberts	Novel Perspective on Hybrid Mesons	Nanjing University
9:15-9:45	Wei Chen	Predictions of mass spectra for light hybrid baryons	Sun Yat-Sen University
9:45-10:15	**Photo and tea break**		
Chair: Ju-Jun Xie			
10:15-10:45	Cheng-Ping Shen	Recent exotic states and prospects at Belle and Belle II	Fudan University

10:45-11:15	Yasuhiro Yamaguchi	Hadronic molecules near thresholds: T_{cc} and its partners	Nagoya University
11:15-11:45	Jia-Jun Wu	Is $P_c(4457)$ a positive parity state?	University of Chinese Academy of Sciences
11:45-12:05	Zi-Yang Lin	P-wave molecular resonance: G(3900)	Peking University
12:05-14:00	**Lunch**		
Chair: Masayasu Harada			
14:00-14:30	Shin Hyung Kim	Search for the light pentaquark in $K^+d \to K^0pp$ reaction at J-PARC	Kyungpook National University
14:30-15:00	Qi-Fang Lü	Reveal short range interactions between u/d quarks in the NN, D_{03} and D_{30} systems	Hunan Normal University
15:00-15:25	Attaphon Kaewsnod	Investigation of helicity amplitudes of N(1520) and N(1535) resonances including pentaquark components	Suranaree University of Technology
15:25-15:45	Ya-Qi Cui	Perspective on the pseudoscalar glueball	Nanjing University
15:45-16:05	Kai-Sa Qiao	Production of Λ_c states and $\bar{D}N$ states at EicC and EIC	Institute of Theoretical Physics

16:05-16:25	**Tea break**		
Chair: Yupeng Yan			
16:25-16:55	Sangho Kim	Exclusive J/ψ photoproduction on nucleon and nuclei	Soongsil University
16:55-17:20	Yan Lyu	Nucleon-charmonium interactions from lattice QCD	RIKEN
17:20-17:45	Bing Wu	Deciphering the mechanism of J/ψ-nucleon scattering	University of Electronic Science and Technology of China
17:45-18:05	Victor Montesinos	On the determination of the D meson width in the nuclear medium with the transparency ratio	University of Valencia
18:05-20:00	**Dinner**		

December 10th, Tuesday			
Chair: Zhun Lu			
8:30-9:00	Hosaka Atsushi	Coexistence of extended and compact structures: for the case $\Omega(2012)$	Osaka University

9:00-9:30	Xiao-Hai Liu	Identify the two-pole structure from a flavor filter	Tianjin University
9:30-10:00	Liuming Liu	Searching for six quark states in Lattice QCD	Institute of Modern Physics
10:00-10:25	Zheng Zhao	Study of 1^{-+} Fully Light, Charmonium-like, and Fully Charm Tetraquark Spectroscopy	Suranaree University of Technology
10:25-10:45	**Tea break**		
Chair: Hyun-Chul Kim			
10:45-11:15	Jung Keun Ahn	Exotic Hadrons with Two Strange Quarks	Korea University
11:15-11:45	Zhi Yang	Coupled-channel framework for the exotic structures near thresholds	University of Electronic Science and Technology of China
11:45-12:15	En Wang	Search for $D\bar{D}$ bound state	Zhengzhou University
12:15-14:00	**Lunch**		
Chair: Qian Wang			
14:00-14:30	Yan-Rui Liu	A model study of tetraquark and pentaquark states	Shandong University

14:30-14:55	Kai Xu	Light and Hidden-Charm Pentaquark States in Molecular and Pentaquark Pictures	Suranaree University of Technology
14:55-15:20	Sara Rahmani	Study of $D^0 \to K^+K^-\eta$ and $\pi^+\pi^-\eta$	Hunan Univeristy
15:20-15:40	Takuma Nishibuchi	Classification of eigenstates in coupled-channel scattering amplitude with the chiral unitary method	Tokyo Metropolitan University
15:40-16:00	Mitsuru Tanaka	Analysis of the Isovector State of Doubly Heavy Tetraquarks Using Effective Field Theory Respecting Superflavor Symmetry	Nagoya University
16:00-16:20	**Tea break**		
Chair: Yasuhiro Yamaguchi			
16:20-16:50	Lianrong Dai	Correlation function for the bottom system and inverse problem	Huzhou University
16:50-17:20	Chu-Wen Xiao	Correlation function and the inverse problem in the two-body interactions	Guangxi Normal University
17:20-17:40	Wei-Lin Wu	Doubly heavy tetraquark bound and resonant states in the quark model	Peking University
17:40-18:00	Ibuki Terashima	Properties of X(3872) from hadronic potentials coupled to quarks	Tokyo Metropolitan University

18:00-18:20	Ye Yan	pΩ interaction and correlation function	Nanjing Normal University
18:20-20:00	**Dinner**		

December 11th, Wednesday			
Chair: Zhi-Yong Zhou			
8:30-9:00	Hyun-Chul Kim	Heavy pentaquarks with multi-strangeness	Inha University
9:00-9:30	Qian Wang	The pole structures of the X(1840)/X(1835) and the X(1880)	South China Normal University
9:30-10:00	Satoshi Nakamura	Global coupled-channel analysis of $e^+e^- \to c\bar{c}$ data	Shandong University
10:00-10:30	Mao-Jun Yan	New insight into the OZI suppression and the $X_0(4140)$, $X_1(4140)$ and $X_1(4685)$ as hadronic molecules	Southwest University
10:30-10:50	**Tea break**		
Chair: Jung-Keun Ahn			
10:50-11:20	Daris Samart	The equation of state of the neutron stars with the $d^*(2380)$ degree of freedom in a hadronic molecular picture	Khon Kaen University

11:20-11:45	Ahmad Jafar Arifi	Two-pion emission decays of singly heavy baryon	RIKEN
11:45-12:10	Hee-Jin Kim	Dynamical generation of hidden-charm meson states in heavy meson scattering	Inha University
12:10-14:00	**Lunch**		
Chair: Bing-Ran He			
14:00-14:30	Masayasu Harada	Study of the decay width of Tcc tetraquark based on a quark model	Nagoya University
14:30-15:00	Rui Chen	Exploring the two-body strong decay properties of the possible $\Lambda_c K^{(*)}$ and $\Sigma_c K^{(*)}$ molecules	Hunan Normal University
15:00-15:25	Thanat Sangkhakrit	Radiative Decays of χ_{c1} States in the Effective Field Theory Approach	Suranaree University of Technology
15:25-15:45	Han-Nan Wang	The production and decay of X(3872) related to B meson	Institute of Modern Physics
15:45-16:05	Yao Ma	Three- and four-lepton bound and resonant states	Peking University
16:05-16:25	**Tea break**		

Chair: Hai-Qing Zhou			
16:25-16:55	Bing-Ran He	Quark model with hidden local symmetry and its application to the multi quark systems	Nanjing Normal University
16:55-17:25	Meng-Lin Du	Effective range expansion including the left-hand cut arising from the OPE	University of Electronic Science and Technology of China
17:25-17:55	Denny Lane Sombillo	Machine learning-based line shape analysis of exotic hadron candidates	University of the Philippines
17:55-18:10	Hosaka Atsushi	Closing remarks	Osaka University
18:10-20:00	**Dinner**		

December 12th, Thursday	
8:00-18:00	**Leaving**

Introduction of Southeast University:

Southeast University (SEU), located in Nanjing, the ancient capital city of six dynasties, is a prestigious institution of higher learning renowned both at home and abroad. As one of the national key universities directly subordinate to the Ministry of Education of China and jointly established with Jiangsu Province, it is also listed as one of the universities involved in National “985 Project” “211 Project”. In 2017, SEU was ranked on the list of constructing “Class A first-rate world universities”.

SEU, as one of the time-honored institutions of higher learning in China with profound cultural heritage, its origin can be traced back to 1902 when it was founded as Sanjiang Normal College, then known as Liangjiang Normal College, Nanjing Higher Normal School, State Southeast University and State Central University, etc.. In 1952, national colleges and universities greatly adjusted their departments and disciplines by moving out the literature and science disciplines. Based on the College of Engineering of the original State Central University, relevant disciplines of Fudan University, Chiao Tung University, Zhejiang University and University of Nanking etc. were incorporated in succession to establish Nanjing Institute of Technology on the original site of State Central University. In May 1988, the university was renamed to Southeast University. In April 2000, a new Southeast University was established in combination with Nanjing Railway Medical College, Nanjing College of Communications and Nanjing Geological School. In the past 120-year school management, SEU, in the spirit of patriotism and concerning people all over the world, has been always making unyielding efforts in pursuit of prominence to achieve scientific progress and national rejuvenation. With time goes by, the school has gradually shaped its outstanding school spirit of “rigor, truthfulness, unity and diligence”, the school management philosophy of “being renowned for science and serving the country with talents”, and the school motto of “striving for perfection”.

Currently, SEU has set up 34 departments with 83 bachelor's degree programs, 34 first-leveldisciplines authorized to confer PhD Degree and 48 first-level disciplines authorized to confer Master's Degree. Among the full-time 36,277 students, there are 16,200 undergraduate students and 20,077 graduate students including 1,966 overseas students, among which, 1,523 study for different academic degrees. Right now, SEU has three campuses, respectively, Sipailou Campus, Jiulonghu Campus and Dingjiaqiao Campus, covering an area of 5888mu (1mu = 666.7 m^2) in total, among which, Jiulonghu Campus covers an area of 3,752.35mu with the total building area of 789,700m^2. The school's library covers an area of 66,900m^2, compromising 4.4 million volume of books of all sorts. In addition, the school has also set up Wuxi Branch and Suzhou Campus.

School of Physics, Southeast University:

Our school of physics originated from the "Gezhi" department of Sanjiang Normal School established in 1904. In 1952, because of the reorganization of college/university system in China, Nanjing Institute of Technology established the physics teaching and research group. In 1983, the department of physics & chemistry was re-established, and later the department of physics was founded in 1989. In 2017, the department of physics was expanded to school of physics. During the past century, numerous distinguished scholars have either studied or worked in our school of physics and its predecessors, including Prof. Chien-Shiung Wu, Prof. You-Hsun Wu, Prof. Chung-Yao Chao and Prof. Jici Yan.

Our school of physics now has both Master of Science and Doctor of Philosophy programs in the first-level subject of physics. School of physics also grants Bachelor of Science degree in Physics and Applied Physics and offers post-doctoral research platform. Our school of physics consists of department of physics, department of applied physics, teaching and research center of college physics, as well as center of physical experiments.