

## Workshop on Recent Developments

**12/17 - 20**  
**2025**

**from QCD to Nuclear Matter**

📍 5F, 1st Meeting Room, Institute of Physics, Academia Sinica

### Invited Speakers

Kazuya Aoki / <i>KEK</i>	Chia-Ming Kuo / <i>National Central Univ.</i>
Elena Bratkovskaya / <i>GSI</i>	Tomoya Naito / <i>Univ. Tokyo</i>
Evgeny Epelbaum / <i>Ruhr-Universität Bochum</i>	Takashi Nakatsukasa / <i>Univ. Tsukuba</i>
Anthony Francis / <i>NYCU</i>	Yasushi Nara / <i>Akita Int'l. Univ.</i>
Kenji Fukushima / <i>Univ. Tokyo</i>	Muneto Nitta / <i>Keio Univ.</i>
Yuki Fujimoto / <i>Niigata U.</i>	Alexander Rothkopf / <i>Korea Univ.</i>
Yoshimasa Hidaka / <i>TITP Kyoto</i>	Kenta Shigaki / <i>Hiroshima Univ.</i>
Natsumi Ikeno / <i>Keio Univ.</i>	Daiki Suenaga / <i>Nagoya Univ.</i>
Tadaaki Isobe / <i>RIKEN</i>	Hiroyuki Tajima / <i>Univ. Tokyo</i>
Masakiyo Kitazawa / <i>TITP Kyoto</i>	Yuya Tanizaki / <i>TITP Kyoto</i>
	Hajime Togashi / <i>Kyoto Univ.</i>



### Organization Committee

Wen-Chen Chang / <i>Academia Sinica</i>	Naoki Yamamoto / <i>Keio University</i>
Philipp Gubler / <i>JAEA</i>	Di-Lun Yang / <i>Academia Sinica</i>
Tomoya Naito / <i>University of Tokyo</i>	

Contact: Ms. CY. Svetlana Sam, [samcy@as.edu.tw](mailto:samcy@as.edu.tw), 02-2789-8386

Sponsors



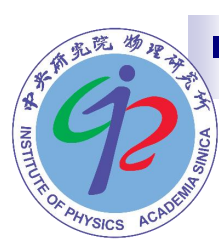
# Introduction to Workshop on recent developments from QCD to nuclear matter

## Di-Lun Yang

Institute of Physics, Academia Sinica (Dec. 17, 2025)

### Organizers :

Wen-Chen Chang (Academia Sinica)  
Philipp Gubler (JAEA)  
Tomoya Naito (University of Tokyo)  
Naoki Yamamoto (Keio University)  
Di-Lun Yang (Academia Sinica)



# The Institute of Physics, Academia Sinica

- Academia Sinica (AS, Latin: Academia Sinica, lit. 'Chinese Academy'; Chinese: 中央研究院; lit. 'Central Research Academy')
- It is a government founded research institute analogous to Max Planck Institute and RIKEN.



- The Institute of Physics (IoP) was founded in Shanghai in 1928 and was reestablished in Taipei in 1962.
- Current research areas of IoP can be grouped into four main categories: Quantum Materials Physics, Physics of Active and Living Matter, [Medium High Energy Experimental Group](#), and [High Energy Theory Group](#)
- A new hub of National Center of Theoretical Sciences (physics div.) will be established in IoP from **Jan. 2026**. Please contact me if you are interested in visiting us.

# Previous workshops

## ■ Workshop on Recent Developments in QCD and Quantum Field Theories



Organizers :

Jiunn-Wei Chen (National Taiwan Univ.)

Tetsuo Hatsuda (RIKEN iTHEMS)

Hsiang-Nan Li (Academia Sinica)

Di-Lun Yang (RIKEN Nishina Center)

## ■ Workshop on Recent Developments in Chiral Matter and Topology



Organizers :

Jiunn-Wei Chen (National Taiwan Univ.)

Guang-Yu Guo (National Taiwan Univ.)

Tetsuo Hatsuda (RIKEN iTHEMS)

Chang-Tse Hsieh (Kavli IPMU / ISSP, the Univ. of Tokyo)

Hsiang-Nan Li (Academia Sinica)

Tomoki Ozawa (RIKEN iTHEMS)

Di-Lun Yang (RIKEN Nishina Center; YITP, Kyoto)



# Scientific purposes

- To stimulate the “cross-field” interaction and collaboration for researchers interested in the following topics :
  1. Heavy ion collisions & high-energy QCD  
(organizers : Wen-Chen Chang, Di-Lun Yang)
  2. Dense QCD matter & nuclear astrophysics  
(organizers : Naoki Yamamoto)
  3. Dense hadronic & nuclear matter (including nuclear structure)  
(organizers : Philipp Gubler, Tomoya Naito)
- ➡ We need the input from experts both inside and outside these fields and the cross talks between experimentalists and theorists.
- The workshop comprises 3 overview talks (40 min), 17 invited talks (30 min), and 10 contributed talks (20 min).



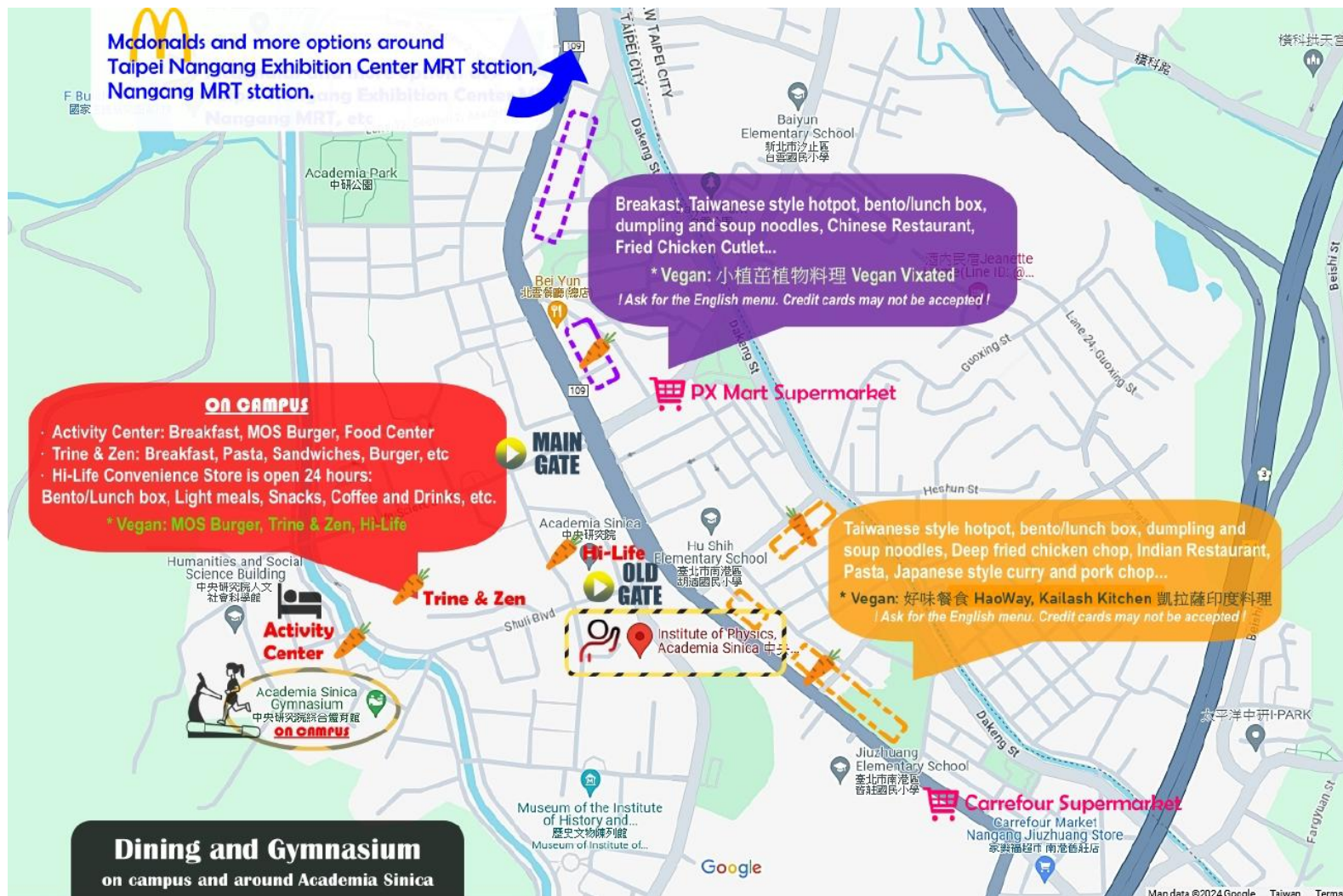
# Workshop guidelines

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- Some snacks & coffee will be served after 9:30 am. You are welcomed to come earlier for discussions.
- Dec. 19 (Friday) afternoon : free discussions or self-organized excursions
- Please upload or send me the slides preferably one day before your talk.
- Recommended : 35 min presentation + 5 min Q&A for the 40-min overview talk, 25 min presentation + 5 min Q&A for the 30-min talk, 17 min presentation+3 min Q&A for the 20-min talk. (~5 min extension is possible)
- One may ask questions during the presentation, but please postpone long discussions to Q&A or the break.
- We look forward to fruitful discussions, cross-field exchanges, and potential collaborations.



# Lunch options



# Excursion recommendations

## 1. National Palace Museum (by taxi)

(國立故宮博物院)



## 2. Jiufen Old Street (by taxi)

(九份老街)



## 3. Maokong Gondola

(貓空纜車)

