DEPARTMENT OF PHYSICS
THE UNIVERSITY OF HONG KONG
香港大學物理系

SHKU Science

Physics Newsletter

October | 2026

New Member of the Department

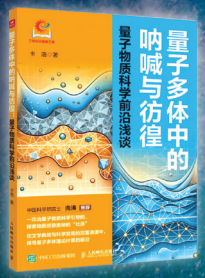


Prof. Yihan Wang
Assistant Professor
B.S. USTC; M.A., Ph.D. SBU

It is my great pleasure to join the Department of Physics and the Hong Kong Institute for Astronomy and Astrophysics. Prior to this, I was a postdoctoral researcher at the University of Wisconsin-Madison and a Fellow of the Nevada Center for Astrophysics at UNLV. As a theoretical and computational astrophysicist, I study transient phenomena around supermassive black holes – tidal disruption events, gamma-ray bursts, and gravitational-wave sources born in AGN accretion disks. As a member of the Einstein Probe, SVOM, and LHAASO collaborations, I connect theoretical models with new high-energy observations.

Promotions, Awards, Research Highlights and Conference

- Prof. Ziyang Meng has published a popular physics book, “Shouts and Hesitations in Quantum Many-Body Systems: A Glimpse into the Frontier of Quantum Matter 《量子多体中的呐喊与彷徨：量子物质科学前沿浅淡》: "Shouts and Hesitations in Quantum Many-Body Systems" is a compelling collection of science essays by Zi Yang Meng (pen name: Carlo) of the University of Hong Kong, which offers a panoramic and literary tour of the frontiers of condensed matter physics. Borrowing its title from the works of the legendary Chinese writer Lu Xun, the book demystifies complex phenomena like quantum moire materials, quantum spin liquids, topological order, and non-Fermi liquids through a unique blend of rigorous science, cultural metaphors, and personal reflection. It serves as both an accessible primer on quantum many-body theory and a philosophical look at the modern physicist's journey to uncover the emergent laws of quantum matter.



- HKU astrophysicists contributed to the interpretation of EP250702a, a possible first-ever observation of an intermediate-mass black hole tearing apart a white dwarf and launching a relativistic jet, detected by China's Einstein Probe satellite. The work, published as a cover article in Science Bulletin, features Dr. Jin-Hong Chen as a co-first author, Prof. Lixin Dai as a co-corresponding author, and Prof. Bing Zhang as a co-author. The discovery attracted extensive international media attention, including coverage by CCT **https://www.scifac.hku.hk/news/EP-observation-white-dwarf**

Other Staff Movement

- Prof. Ferenc Krausz, 2023 Nobel Laureate in Physics, has just joined the department as Chair Professor.
- Prof. Sir Andre Geim, 2010 Nobel Laureate in Physics, has just joined the department as Chair Professor.
- Ms. Lee, Ying Wai Pearl has just joined the department as Senior Executive Assistant.
- Mr. Kwong Nam Chan has just joined the department as Senior Technical Assistant.
- Prof. Meng Gu, Assistant Professor, has left the department. She joined us in 2023.
- Ms. Muses Wong, Clerk II, has left the department. She joined us in 2024.
- Dr. Chunhui Ai, Technical Officer, has left the department. He joined us in 2023.
- Ms. Ling Wong, Office Attendant, has left the department. She joined us in 2019.
- Mr. Kam Cheong Ip, Technician, has left the department. He joined us in 1990.

Editors:
Dr. Kai-Ming Lee
Prof. Shizhong Zhang (acting)

https://www.physics.hku.hk/

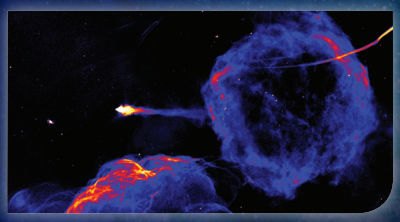
Promotions, Awards, Research Highlights and Conference

- A James-Webb Space Telescope proposal led by Mr. Sung Kei Li (PI) from HKU has been accepted for Cycle 5 (GO-10417). This is the first, and the only, proposal to date that is led by a university in Hong Kong. The project, "COHORTS," will use the telescope to observe the "Cosmic Horseshoe," (see figure) a strongly-lensed distant starburst galaxy. This search for lensed stars will be conducted in a galaxy-galaxy strong lensing system rather than a galaxy cluster for the first time, aiming to resolve individual stars at "cosmic noon" and measure the stellar initial mass function. The observations are anticipated for the second quarter of 2027.



Credit: ESA/Hubble & NASA

- Prof. Lixin Dai named RGC Research Fellow for pioneering black hole research, see **https://www.scifac.hku.hk/news/RGC-Lixin-Dai**.
- Mr. Sung Kei Li has been awarded the Hung Hing Ying Scholarship issued by HKU. This scholarship aims to provide grants for research postgraduate students in physical sciences, on the basis of academic merit.
- Mr. Ting Tung Wang and Mr. Sung Kei Li have been awarded the Croucher Postdoctoral Fellowship issued by the Croucher Foundation. They will be taking on postdoctoral research at the University of Bologna and Instituto de Física de Cantabria starting this fall.
- Prof. Ng's PhD student, Mr Zhihong Shi, won the runner up in the Graduate School Research Image Competition: The Mouse (or Sperm) Pulsar Wind Nebula.



- Rommulus Lewis, Hetansh Shah (University of Massachusetts) and Dr Amruth Alfred have written a paper currently under peer review, analysing all preprints from the 2025 Astrophysics arXiv, **https://arxiv.org/abs/2602.12303**. The paper highlights trends about the most used telescopes, cost of publishing in journals, subfields and research areas prioritised by the field, citation metrics, location-based statistics, a first-of-its-kind Astrophysical Spectral Fingerprint showing the distribution of papers across the electromagnetic spectrum, and more. The preprint garnered considerable attention, including from an organisation that manages a country's astronomy infrastructure and hopes to use the paper's analysis to better support future grant proposals.
- Prof. Ziyang Meng published a first author paper in Nature Physics, in which he and two other coauthors advocated for a fundamental paradigm shift: treating analytical theory, quantum many-body numerical simulations, and experimental materials science not as subservient verification tools, but as an indivisible, egalitarian whole to reshape the collective paradigm of quantum magnetism research domain. **https://www.nature.com/articles/s41567-026-03304-5**
- PhD candidate Haochen Wang in Prof. Wang Yao's group, has been awarded the 2025 NSFC Youth Student Basic Research Project for hybrid exciton quantum states in 2D semiconductor moiré materials-artificial microstructures. This funding supports outstanding PhD students in pursuing innovative research, providing CNY 300,000 over two years.
- Dr. Amruth and Prof. Lim, in collaboration with Prof. Zhengxiang Li and PhD student Jiajun Zhou from Beijing Normal University, have just published an article in the Astrophysical Journal Letters on probing the nature of Dark Matter with gravitational lensing. Their work is the first time where Schrodinger-Poisson simulations of ultralight dark matter (composed of axions) are used to compute the resulting gravitational lensing effects. This joint work was the result of multiple visits by Dr. Amruth and Prof. Lim to BNU, made possible by multiple awards that encourage strong collaborative efforts and has set the stage for further collaboration via the Hong Kong Institute of Astronomy and Astrophysics.

A Scientific Journey to Italy

Three of our Phd students, Min Long, Menghan Song and Ting-Tung Wang, visited the Abdus Salam International Centre for Theoretical Physics (ICTP) at Trieste in Italy for three weeks in late 2025. During their stay, they have not only participated the *Advanced School and Conference on Quantum Matter* but also initiated scientific discussions and collaboration with the physicists coming all over the world. More details could be found in **https://gradsch.hku.hk/news_and_events/newsletter/exploring-italys-scientific-and-cultural-heritage-journey-trieste-venice**.



Photo from https://indico.ictp.it/



from Left: Menghan Song, Ting-Tung Wang and Min Long