

Unlocking the Violent Cosmos:

A Journey to Understand Astrophysical Transients

Date

October 27, 2026 (Tue)

Time

5:30 - 6:45pm (HKT)

Venue

Rayson Huang Theatre, HKU

Abstract

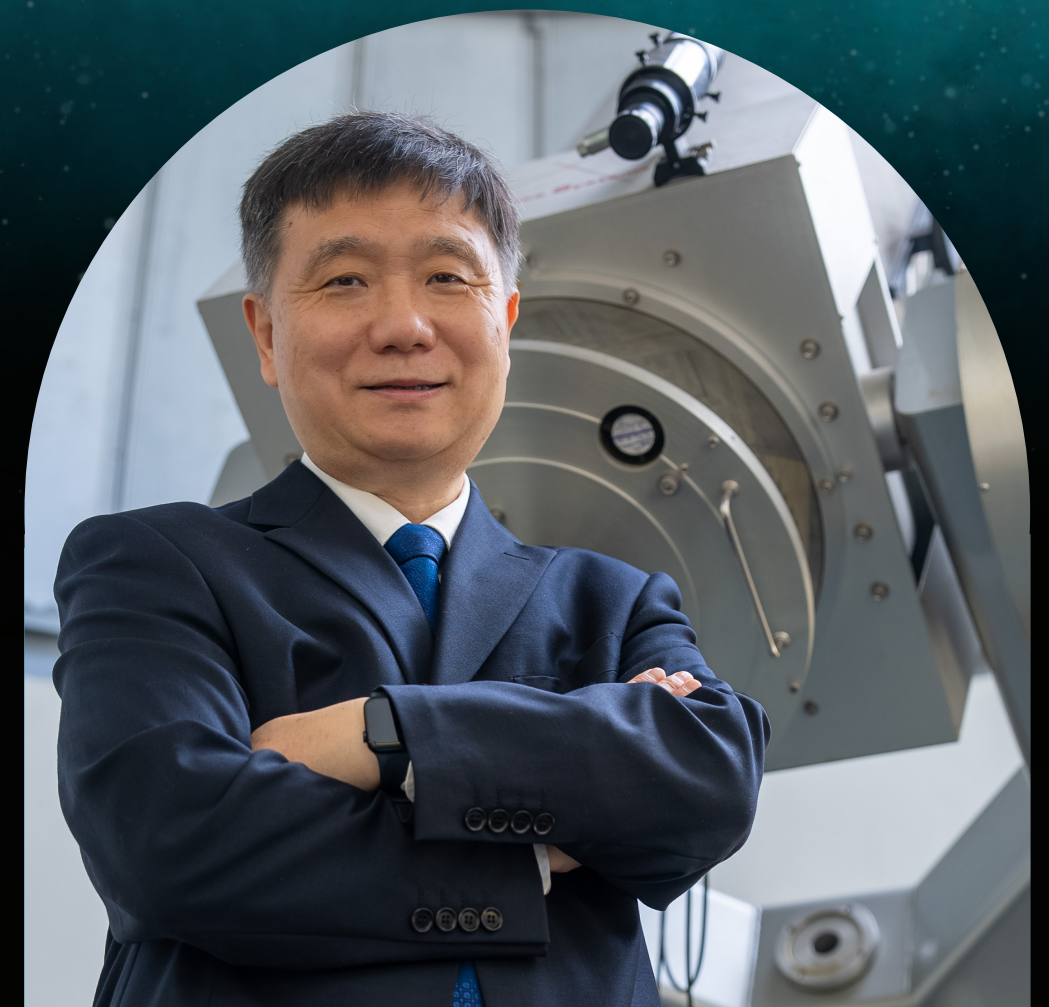
The night sky appears peaceful, but our universe is filled with fireworks created by various astrophysical transients that light up all wavelengths — and even in non-electromagnetic channels such as gravitational waves and neutrinos. This lecture introduces humanity's journey to understand two mysterious transient phenomena, known as gamma-ray bursts and fast radio bursts, highlighting observational breakthroughs and theoretical insights that help solve these cosmic puzzles, both from a historical perspective and through the lens of the speaker's research career.

Biography

Professor Bing Zhang is Chair of Astrophysics in the Department of Physics and Founding Director of the Hong Kong Institute for Astronomy and Astrophysics at The University of Hong Kong. He joined HKU in 2025 as a Global STEM Professor. He earned a BSc, an MSc and a PhD from Peking University, conducted postdoctoral research at NASA's Goddard Space Flight Center and Pennsylvania State University, and was a Distinguished Professor at the University of Nevada, Las Vegas, before joining HKU.

An internationally recognised theoretical astrophysicist, Professor Zhang's research focuses on high-energy and transient astrophysics, including gamma-ray bursts, fast radio bursts, neutron stars, black holes, and multi-messenger phenomena. His work combines theoretical modelling with multi-wavelength and multi-messenger observations to investigate the physical mechanisms powering some of the most energetic and rapidly evolving events in the Universe.

He has published more than 650 refereed papers, including about 30 in *Nature* or *Science*, and is a Fellow of the American Physical Society and a co-recipient of the Bruno Rossi Prize. He plays a leadership role in several of China's major astronomical space missions and telescopes, including Einstein Probe (EP), Space Variable Objects Monitor (SVOM), and Five-hundred-meter Aperture Spherical radio Telescope (FAST).



Professor Bing ZHANG

- ▶ Chair of Astrophysics, HKU Department of Physics
- ▶ Founding Director, Hong Kong Institute for Astronomy and Astrophysics



Registration

Registration is required.
Please scan the QR code or visit
<https://tinyurl.com/msk3fdua>
for lecture details and registration.