



DEPARTMENT OF PHYSICS
THE UNIVERSITY OF HONG KONG



香港天文與天體物理研究所
THE HONG KONG INSTITUTE FOR
ASTRONOMY AND ASTROPHYSICS

HKIAA SEMINAR SERIES

Observing the evolution of Dark Energy into Dark Matter across all scales with the JWST and Euclid satellites

ABSTRACT

Standard Cosmology is suffering renewed “tension” disfavours both Cold Dark Matter as heavy particles and Dark Energy as a fixed cosmological constant. Instead, evidence is emerging of a unifying “Axiverse”, where a spectrum of light axions from String Compactification evolves Dark Energy into Dark Matter via discrete steps, to generate Wave Dark Matter and desirable large scale evolution. I will outline our simulations and predictions for this fruitful new path applied to forefront imaging with the JWST and Euclid satellites.

SPEAKER

Prof. Tom BROADHURST

UNIVERSITY OF THE BASQUE COUNTRY



Prof. Tom Broadhurst obtained his PhD in the UK, using the Anglo-Australian Telescope to define the first redshift survey for measuring galaxy evolution. As junior faculty in Berkeley, he studied dark matter using gravitational lensing by galaxy clusters, with Hubble Space Telescope images and spectroscopy from the Hawaiian Keck telescopes. Since 2014 he has been pioneering a de-Broglie Wave interpretation of Dark Matter, with his group at the University of the Basque Country, using the latest JWST and Euclid satellite images, to test the distinctive predictions of this now leading dark matter interpretation. He received the NASA excellent achievement medal for his role in constructing the Advanced Camera on the Hubble Space Telescope and has supervised many PhD and masters students over the past 25 years.

27 July 2026 (Monday)

2:30 – 3:30 PM

Venue: Room 522, 5/F · Chong Yuet Ming Physics Building

Department of Physics, The University of Hong Kong

Anyone interested is welcome to attend.



ZOOM FOR ONLINE PARTICIPANTS

Meeting ID 964 7297 1072

Password 410133

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