



THE CHINESE UNIVERSITY OF HONG KONG  
*Department of Physics*  
COLLOQUIUM

# Massive Star Formation: Unknowns Revealed by Observations

*by*



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*Date: April 19, 2024 (Friday)*

*Time: 4:00 - 5:00 p.m.*

*Place: L2, Science Centre, CUHK*

(Light refreshments will be served at [SCNB 1/F lobby](#) from 3:30 to 3:50 p.m.)

ALL INTERESTED ARE WELCOME

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## Abstract

To understand how stars form from an accumulation of gas and dust is essential to astrophysics. Over the past decades, the study of low-mass star formation has made great progress, but the research on the formation of massive stars, which are rare but dominate the luminosity and ISM evolution, is far more challenging. In this talk I will introduce our observational works aimed at constraining initial conditions and mass accretion processes of massive star formation, including a comprehensive survey of Cygnus X, which is the most massive and active giant molecular cloud complex within 3 kpc from the Sun. By analyzing a rich compilation of multi-wave band data obtained from single-dish and interferometer telescopes, we see that the existing theoretical models are all facing serious problems, and the roles played by magnetic field and turbulence in cloud evolution are to be further explored.

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