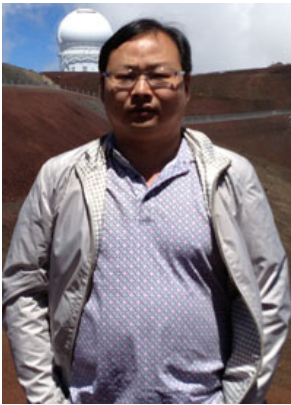




THE CHINESE UNIVERSITY OF HONG KONG
Department of Physics
COLLOQUIUM

The Three Evolutionary Pathways of Galaxy Ecosystems: Recent Achievements and Open Questions

by



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Date: March 22, 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

Abstract

Galaxies form at the center of dark matter halos through the cooling and condensation of gas. Internal structure such as spiral arms and bars as well as minor mergers/interactions with surrounding satellite galaxies may drive the "secular evolution" in central galaxies. Some central galaxies may fall into more massive halos and become satellite galaxies suffering from gas stripping and star formation quenching due to environmental effects. In addition, central galaxies may experience major mergers with other central galaxies of comparable mass, leading to the formation of galaxies with early-type morphology or bulge-dominated red disk galaxies. The three evolutionary pathways together can explain the diverse properties of the observed galaxies in large surveys, but a number of key questions still remain open. I will review some of the recent achievements based on both observations and simulations, as well as open questions that may be answered in the near future.

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