Subject :

Galaxy Evolution and Galaxy Clusters

Title :

Panoramic and Panchromatic Views of Galaxy Evolution across Cosmic Environment

Lecturer :

Yusei Koyama (Subaru Telescope)

Outline :

Galaxies in the present-day universe are really diverse – but the nature of individual galaxies (e.g. color, mass, star formation rate, morphology, etc) are not just randomly assigned. Like human beings – properties of galaxies can be altered by their surrounding environments. Understanding *when*, *where*, and *how* the properties of galaxies are established is thus one of the ultimate goals of the extra-galactic astronomy. Galaxy (proto)clusters in the early universe can be an excellent laboratory to study the galaxy formation along the structure formation of the universe. This lecture will focus on the star formation history and the build-up of a variety of galaxy morphologies across cosmic time and environment, by reviewing the recent progress in the observational studies of distant clusters/protoclusters.

Learning objectives :

- Galaxy evolution across cosmic time
- Environmental impacts on galaxy formation
- Search for distant (proto)clusters in the early universe

Textbooks and references :

N/A