

# The fate of galaxies: from morphologies to the co-evolution of black holes and their hosts

*Monday 24 February 2025 09:30 (1h 30m)*

Galaxies are the fundamental building blocks of the Universe, yet their definition and classification have evolved over time. In this lecture, I will provide a historical perspective on the definition of galaxies, followed by an overview of the Hubble sequence and the main characteristics that distinguish different galaxy types. I will present the evolutionary pathways leading to the blue and red sequences, highlighting the role of black hole–galaxy co-evolution. Finally, I will introduce the concepts of active galactic nuclei (AGN) and stellar feedback, discussing their impact on galaxy evolution within the framework of cosmological simulations.

**Presenter:** AUDIBERT, Anelise

**Session Classification:** Galaxy Formation and Evolution