



## Formazione ed Evoluzione delle Galassie (Invited review)

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The past decade has seen prodigious advances in the subject of galaxy formation and evolution. Major astronomical facilities (HST, VLT, LBT, Subaru, Keck, Spitzer, Herschel, Chandra, XMM) have provided the scientific community with a panchromatic view of the Universe, allowing us to investigate the mass assembly, the star formation rate and the black hole accretion rate at  $0 < z < 7$ . Despite these impressive efforts, several problems regarding the process of AGN/galaxy formation and evolution are still open. Who are the responsible sources for the Reionization epoch: Pop III stars or AGNs ? How are the seeds of super-massive BHs at  $z > 6$  formed ? Who quenched the star formation rate of galaxies ? Large surveys, both in imaging and spectroscopic, are currently providing the first answers to these hot topics, shedding the first light on the Reionization process and Cosmic Dawn epoch. ALMA just started to dig deeper into the dust at high- $z$ . In the future, large astronomical facilities (JWST, ELTs, Athena, SKA) will provide detailed information on the physical properties of galaxies at  $z > 6$  which are barely detected by the current facilities.

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