



## The Symbiosis between Radio Source and Galaxy Evolution

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### Message from the Guest Editors

Dear colleagues,

It has been suggested that powerful AGN-driven outflows directly affect the evolution of galaxies, heating the galaxy's cold gas and/or expelling it from the central bulge regions. This, in turn, influences galaxies' star formation histories, mediating the relationship between host galaxy and central supermassive black hole and shaping the high luminosity end of the galaxy luminosity function. This points to a direct link between nuclear activity (which occurs when the black hole is growing via accretion) and star formation and matter accretion (which occurs when the galaxy is growing). The growth of the central engine and the evolution of the galaxy are linked in a symbiotic relationship impacting their co-evolution. While AGN feedback is now routinely incorporated into hydrodynamical simulations of galaxy evolution, major uncertainties remain. We are yet to understand in detail how AGN interact with the forming and evolving host galaxies, and how the host galaxy and its evolution impacts the central black hole.





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