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Title: *“Black Holes and Active galaxy Nuclei”*

Abstract. Super-massive black holes are the central engine of Active Galactic Nuclei (AGN) and quasars, the most energetic and compact objects in the Universe. Since their identification in the 1960's, much has been learned about their nature and formation, from multi-wavelength (radio to gamma-rays) and multi-messenger observations (neutrinos, cosmic rays, gravitational waves). Recent works at high spatial resolution have revealed the shadow of the black holes, their accretion disk, and how the relativistic jets are launched. I will describe the mechanisms to feed the black holes, and how, when they are too greedy, the black holes can reject their food, and push the gas out of galaxies, preventing star formation.