

## Where does AGN activity occur within the cosmic web?

*Tuesday 8 October 2024 10:00 (20 minutes)*

The cosmic environments of accreting supermassive black holes provide powerful insights on the intertwined histories of structure growth, black hole growth, and galaxy evolution. One way to probe these environments is via the spatial clustering of active galactic nuclei (AGN). Using new data from the BASS and HETDEX wide-field surveys, I will present recent AGN clustering measurements as a function of various AGN properties at low ( $z \sim 0.03$ ) and moderate ( $z \sim 2.5$ ) redshifts. To interpret these measurements, I forward-model AGN in cosmological simulations to determine the main drivers of AGN clustering and to constrain the relationship between black holes and their host dark matter halos. I will discuss how these results inform the physical mechanisms for how black hole growth is triggered and quenched over cosmic time.

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