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## Galaxy assembly in the cosmic web: a multi-scale tidal analysis

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One of the most striking features of the large-scale universe is the observed web-like pattern in the distribution of galaxies, forming clusters, filaments, and voids. This cosmic structure, known as the Cosmic Web, plays a crucial role in galaxy formation and evolution. To investigate this relationship, we employ the NEXUS\_tidal algorithm to analyse the matter distribution from IllustrisTNG simulations. NEXUS is a multi-scale approach that identifies cosmic environments based on tidal fields, providing a detailed classification of these complex structures. By focusing on central galaxies with early and late assembly histories and their associated dark matter halos, we aim to explore correlations between galaxy assembly and their position within the cosmic web.

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