

From cosmic dawn to cosmic noon: what do massive star clusters tell us about galaxies in the cosmic morning

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Massive star clusters form in extreme conditions, rarely found in the local Universe but ubiquitous at high redshift. Being bright sources illuminating their host galaxies since the earliest times, they can inform us about the physical conditions of the earliest phases of galaxy formation, now being probed to a great extent by JWST. In this talk, I will show how galaxy simulations complement these new observations by explaining the structural evolution of young galaxies. I will in particular illustrate why the emergence of the disk(s), merger events, and the consumption of the gas conspire to regulate the star formation activity at these redshifts, and ultimately interrupt the formation of massive clusters. I will show how these events could be detected by JWST and future missions.