

Coincident M5-branes and dual singular geometries

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Through a web of string dualities, M5-brane configurations in M-theory can be mapped to geometrical features. In particular, I will discuss this map via heterotic/F-theory duality, using a Horava-Witten description of heterotic $E_8 \times E_8$ string theory as the connection to M-theory. Intersecting or coincident M5-branes are mapped to singular base geometries in F-theory, which also correspond to singular geometries in Type IIB string theory. I will explain these dualities, and if I have time I will discuss geometrical transitions corresponding to deforming M5-brane configurations and point out some cute connections with toric geometry.

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