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Higher derivative couplings from 12 dimensions

In this talk, I will discuss eight derivative couplings in type IIB supergravity involving derivatives of the axiodilaton, and interpret them as α' corrections in F-theory. I will first introduce F/M-theory duality, which underlies the logic of my presentation. I will then show how all the expected kinematical structures of the flux-less sector correctly descend from 12 dimensions, and comment on the issues posed by flux-dependent terms.