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Light Scalars in Light of UV/IR Mixing

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Light scalar fields are ubiquitous in theoretical (astro)particle physics and cosmology. From the perspective of effective field theories, these scalars encounter hierarchy problems unless their masses are protected by a symmetry. Non-standard UV completions involving non-localizable fields may introduce correlations between short and long distances, thereby generating a UV/IR mixing that could account for the existence of light scalars with little hierarchies. In this talk, I will present a concrete realization of this concept within the framework of self-completion by classicalization, a mechanism proposed fifteen years ago by Dvali et al.

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