

Holography, relaxions and the self-tuning of the cosmological constant

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Holography allows a mechanism for the self-tuning of the cosmological constant by considering a universe brane embedded in a bulk dual to a holographic QFT. This mechanism was shown recently to work bypassing earlier problems with bad bulk singularities. By including also a bulk axion (dual to an instanton density of the holographic QFT), we consider the interplay of the self-tuning mechanism and the Electroweak symmetry breaking on the universe brane. Holography provides a large number of saddle point selftuning solutions. Such an approach links relaxion ideas for the hierarchy problem to the self-tuning mechanism of the cosmological constant.

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