

M. Douglas: "Landscape, low energy supersymmetry, and warping"

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A very central question in phenomenology is, what mechanism solves the hierarchy problem. For a long time the only generally accepted solution was low energy supersymmetry. In recent years, other solutions inspired by string theory have been suggested, such as large extra dimensions and warping.

Even more recently, the idea that string theory contains a large landscape of solutions, enabling the anthropic solution to the cosmological constant problem, raises the possibilities that the naturalness considerations which prefer some mechanisms over others are modified in string theory, or even that the hierarchy is not the result of a mechanism.

We discuss the status of these claims, give a general overview of current thinking about how low energy susy, large extra dimensions and warping can be realized in string compactification, and raise questions whose answers would help us decide whether string theory favors any of these alternatives.

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