

The Internal and External Problems of String Theory - A Philosophical View

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Abstract

String theory is at the moment the only advanced approach to a unification of all interactions, including gravity. But, in spite of the more than thirty years of its existence, it does not make any empirically testable predictions, and it is completely unknown which physically interpretable principles could form the basis of string theory. At the moment, "string theory" is no theory at all, but rather a labyrinthic structure of mathematical procedures and intuitions. The only motivations for string theory consist in the mutual incompatibility of the standard model of quantum field theory and of general relativity as well as in the metaphysics of the unification program of physics, aimed at a final unified theory of all interactions, including gravity. The article gives a perspective on the problems leading to and resulting from this situation.

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