

The non-unique Universe

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Abstract

The purpose of this paper is to elucidate, by means of concepts and theorems drawn from mathematical logic, the conditions under which the existence of a multiverse is a logical necessity in mathematical physics, and the implications of Godel's incompleteness theorem for theories of everything.

Keywords: Multiverses; Godel's incompleteness theorem; theories of everything; mathematical logic;

model theory

Specific Sciences: Physics: Cosmology

Specific Sciences: Mathematics

Subjects: Specific Sciences: Physics: Relativity Theory

Specific Sciences: Physics

Specific Sciences: Physics: Quantum Field Theory

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