On the Specialness of Special Functions (The Nonrandom Effusions of the Divine Mathematician)

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Abstract

This paper attempts to address the problem of the applicability of mathematics in physics by considering the (narrower) question of what make the so-called special functions of mathematical physics special. It surveys a number of answers to this question and argues that neither simple pragmatic answers, nor purely mathematical classificatory schemes are sufficient. What is required is some connection between the world and the way investigators are forced to represent the world.

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