

A Mechanism of Baryogenesis for Causal Fermion Systems

Friday 9 September 2022 15:30 (10 minutes)

Causal Fermion Systems is a new approach to unify General Relativity and the Standard Model of particle physics. The theory has been developed by Felix Finster over the past decade. I will give an introduction to the fundamental mathematical structures of the theory and explain how to obtain familiar descriptions as an effective description. Further i will give an overview of results obtained from the Causal Action Principle such as the Gauge group of the Standard Model, 3 generations of fermions and second quantization as a minimizing condition as well as Einsteins field equations. Finally I will give an outlook on the prospects of deriving an explanation for the matter/anti-matter asymmetry in the universe and the potential consequences of this explanation for the cosmic evolution especially the H_0 tension.

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