The fermionic Z2xZ2 classification program: Past, Present and Future

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Abstract

Since the late 80s the fermionic Z2xZ2 orbifolds provide benchmark models to explore the sythesis of the Standard Model with gravity. Over the past 20+ years systematic computerised classification methods were developed to enumerate and explore large classes of these models leading to the seminal discoveries of Spinor-Vector Duality and Exophobic string vacua. In recent years the classification has been extended to non-supersymmetric string vacua with asymmetric boundary condition aiming to explore the existence of quasi-realistic stable de Sitter string vacua. In the futrue the classification will be extended to new classes of string vacua, e.g. higher level models, and further details of the models, e.g. Yukawa couplings.

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