16-fold way conjecture

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Abstract:

Let $V = V_0 + V_1$ be a vertex operator superalgebra. Then V has a canonical automorphism \sigma of order 2 from the super structure. We assume V is rational and C_2-cofinite. We will discuss the super \sigma-twisted modules, connection between representations of V and V_0. We will also explain how the representation theory of V is related to the 16-fold way conjecture in category theory. This talk is based on joint work with Chongying Dong and Richard Ng.