

Vertex operator algebras for logarithmic CFT

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Abstract

The best understood CFTs and VOAs belong to the class of so called rational theories, i.e. theories for which there is only a finite number of simple representations (C_2 cofiniteness) and for which all representations are fully reducible into a direct sum of simple representations (semi- simplicity). In recent years there has been increased interest in a class on CFT whose correlators contain logarithmic terms. A direct consequence of these logarithms is that the representations theory of the corresponding VOA is not semi-simple however in some cases the VOAs can still be C_2 -cofinite. Arguably the best understood family of such VOAs is the W_p - series. In this talk I intend to present the abelian categories of representations as well as my ongoing research with Akihiro Tsuchiya on the monoidal structure (the fusion product) of these categories.