

Conformal embeddings of affine vertex operator algebras

(Talk)

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(joint work with Dražen Adamović)

Conformal embeddings have been extensively studied in conformal field theory, the representation theory of affine Kac-Moody algebras and the theory of affine vertex operator algebras. The construction and classification of conformal embeddings have mostly been studied in the case of positive integer levels. In this talk, we present a general criterion for conformal embeddings at arbitrary levels, within the framework of vertex operator algebra theory. Using that criterion, we construct new conformal embeddings at admissible rational and negative integer levels. In particular, we construct all remaining conformal embeddings associated to automorphisms of Dynkin diagrams of simple Lie algebras.

MSC2010: 17b69, 81r10.

Keywords: vertex operator algebra, affine Kac-Moody algebra, conformal embedding, fusion rules.

Section: Algebra.