INTEGRAL LATTICES AND W-ALGEBRAS

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ABSTRACT

In the first part of the talk, I will introduce certain remarkable W-algebras coming from infinite order automorphisms of lattice vertex algebras. I will report on a recent progress obtained for the algebras of "rank one", whose representation theory has been worked out in many details. In the second part, I will discuss the modular properties of characters of their representations and the related combinatorics, including various q-series identities.

This talk is mainly based on joint work with D. Adamovic and M. Penn.