

MATHEMATICS DEPARTMENT
North Carolina State University

ALGEBRA SEMINAR

Friday, December 1, 2006

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Rutgers University

Logarithmic tensor product theory

ABSTRACT: I will discuss a logarithmic generalization of the tensor product theory for modules for a vertex operator algebra developed by Lepowsky and me. The module categories are not required to be semisimple and modules with generalized weight spaces are studied. As in the earlier series of papers by Lepowsky and me, the tensor product functors depend on a complex variable, but in the present generality, the logarithm of the complex variable is involved. Examples of module categories such that this logarithmic theory can be applied are Kazhdan–Lusztig’s braided tensor categories of suitable modules for affine Lie algebras of negative levels, suitable module categories for the Virasoro algebra and suitable module categories for vertex operator algebras associated to hyperbolic lattices. This is a joint work with Lepowsky and Zhang.

3:00 - 3:50 pm HA 335

Faculty and Students are invited to attend.