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Bojko Bakalov* (bojko_bakalov@ncsu.edu), Department of Mathematics, North Carolina State University, Raleigh, NC 27695. *Twisted logarithmic modules of vertex algebras.*

Motivated by logarithmic conformal field theory and Gromov–Witten theory, I will introduce a notion of a twisted module of a vertex algebra relative to any (not necessarily semisimple) automorphism, generalizing that considered previously by Y.-Z. Huang. Two features of such twisted modules are that they involve the logarithm of the formal variable and the action of the Virasoro operator L_0 on them is not semisimple. I will derive a Borcherds identity and commutator formula for twisted modules. Examples for affine vertex algebras, free bosons, and symplectic fermions will be presented. (Received January 29, 2016)