UNIVERSITY AT ALBANY
State University of New York

College of Arts and Sciences
Department of Mathematics and Statistics

Algebra/Topology Seminar

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On the Extended W-Algebra of Type $\mathfrak{sl}_2$ at Positive Rational Level

Tuesday, October 8, 2013
1:15 p.m. in **BI-152**

Abstract. The extended W-algebra of type $\mathfrak{sl}_2$ at positive rational level is a vertex operator algebra that is of great interest in logarithmic conformal field theory. In this talk I will give an overview of how it is constructed as a subvertex operator algebra of a lattice vertex operator algebra by means of so called screening operators and symmetric Jack polynomials. I will also explain how the screening operator formalism allows one to prove c_2 cofiniteness, compute relations in Zhu's algebra, and classify all simple modules of the extended W-algebra of type $\mathfrak{sl}_2$ at positive rational level.