

1072-17-10

Igor Kriz* (ikriz@umich.edu), Department of Mathematics, University of Michigan, 2074 East Hall, 530 Church Street, Ann Arbor, MI 48109-1043. *An algebraic approach to genus 0 chiral conformal field theory.*

I will report on an approach to making chiral conformal field theory in genus 0 into a fully algebraic object. First, I will discuss a new axiomatization of vertex algebras using graded co-operads in the category of vector spaces, following my joint paper with Ruthi Hortsch and Ales Pultr. Using this axiomatization, I will describe an algebraic axiomatization of genus 0 intertwining vertex operators (which are typically transcendental) via regular algebraic flat connections, following my joint paper with Yang Xiu. I will also talk about interface, via the Riemann-Hilbert correspondence, with previous work by Yi-Zhi Huang, James Lepowsky and others, who used approaches involving both algebra and analysis. (Received April 29, 2011)