

BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

CONFORMAL BLOCKS THROUGH MODE TRANSITION ALGEBRAS

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CCDS 365, Oct 25, 2023, 4-5pm

Tea: 3:45pm in Room 365

Abstract: Vertex operator algebras (VOAs) and their modules define sheaves of conformal blocks over the moduli space of stable curves. In today's talk I will describe how we can study the properties of a VOA, and their conformal blocks, through properties of a family of associative algebras associated with it, which we call Mode Transition Algebras (MTAs). In particular we will see how the degeneration of conformal blocks to nodal curves—behavior which is not fully understood for non-rational VOAs—can be translated into intrinsic properties of the MTAs. If time permits I will also discuss how MTAs relate to higher-level Zhu algebras. This is based on a joint work with A. Gibney and D. Krashen.

See <http://math.bu.edu/research/geom/seminar.html> or contact Yu-Shen Lin (yslin@bu.edu) or Brian Williams (bwill22@bu.edu) for more information.