UNIVERSAL VIRASORO CONSTRAINTS FOR ADDITIVE CATEGORIES

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Time: Fri., May. 24th, 15:00-16:30PM

Venue: Room 110, SCMS

Abstract：

The recent reformulation of sheaf-theoretic Virasoro constraints opens many doors for future research. In particular, one may consider its analog for any nice additive category. In this talk, I will recall the original statement for sheaves and explain how it can be extended to representations of quivers. This is already sufficient to illustrate how to formulate it in complete generality. I will use partial flag varieties which are a special case of moduli of framed representations as a simple example where the constraints can be made explicit. The second part of the talk will develop an alternative viewpoint using Joyce's vertex algebras. This perspective interprets moduli spaces satisfying Virasoro constraints as physical states. Combined with wall-crossing, this also provides a powerful tool for proving results.