

Speaker Travis Schedler

Title: Character and quiver varieties and 2-Calabi–Yau algebras

Abstract: I will recall how to understand character varieties of Riemann surfaces with punctures and boundary conditions as “multiplicative quiver varieties”, which are moduli spaces of representations of the multiplicative preprojective algebra of Crawley-Boevey–Shaw (and recently have been connected to topological field theories and Fukaya categories). We conjecture that this algebra is 2-Calabi–Yau, and in joint work with Kaplan we prove this when it contains a cycle. As a consequence the varieties are formally locally quiver varieties, they are normal, and we can classify the existence of symplectic resolutions, by proving they are factorial in many cases. This contains joint work with Bellamy, Kaplan, and Tirelli.