Contribution ID: **3**   Type: **not specified**

Bicommutant Categories from Conformal Nets, towards constructing fully extended functorial (Segal) chiral CFTs

Monday 22 January 2024 11:35 (30 minutes)

Two-dimensional chiral CFTs have three mathematical formulations, namely VOAs, conformal nets and Segal (functorial) CFTs. We are working on the construction of a fully extended 2d chiral functorial field theory given the data of a conformal net. We introduce some ingredients of the target category of Bicommutant Categories (a model for 3-Hilb) as a categorification of the Morita category of von Neumann algebras. We further give equivalent constructions of the category of solitons (solitonic representations of the net) that we assign to a point with a germ of a 1-manifold in the conformal cobordism category. This is a bicommutant category whose Drinfeld center is representations of the net. Further at the level of 1-morphisms, the composition of intervals maps to categorified Connes-Fusion.

Presenter: NIVEDITA, Nivedita