NATALIA SAULINA, Perimeter Institute

Surface Operators in Chern Simons Theory

I will discuss surface operators in Chern Simons Theory and how they give rise to a consistent gluing of chiral and anti-chiral sectors in the 2d Rational Conformal Field Theory. The algebraic properties of the resulting 2d RCFT, such as the classification of symmetry-preserving boundary conditions, are expressed in terms of properties of the surface operator. I will show that to every surface operator one may attach a Morita-equivalence class of symmetric Frobenius algebras in the ribbon category of bulk line operators. This provides a simple interpretation of the results of Fuchs, Runkel and Schweigert on the construction of 2d RCFTs from Frobenius algebras.