

1110-57-29

Charles Frohman* (charles-frohman@uiowa.edu), Department of Mathematics, The University of Iowa, Iowa City, IA 52242. *The Localized Skein Algebra of a Closed Surface is Frobenius.*

If $K_N(F)$ is the Kauffman bracket skein algebra of a closed surface F where the N denotes the fact that $A = e^{\pi i/N}$, N an odd counting number, then it is a ring extension of the coordinate ring of the $SL_2\mathbb{C}$ -character variety of the fundamental group of F . Extending work of Abdiel and Frohman, we localize $K_N(F)$ by inverting the nonzero characters to get an algebra over the function field of the character variety of F . We prove this algebra is Frobenius. The technique of proof is to lift the problem to a punctured surface, and show that the results there imply the result for a closed surface. The proof requires defining a refinement of the trace appearing in Abdiel-Frohman, arXiv:1501.02631 . (Received January 14, 2015)