

Topology, Arithmetic, & Dynamics Seminar

Algebraic Properties of Skein Algebras of Surfaces

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For a surface F , the space of links in $F \times [0, 1]$ modulo Kauffman bracket skein relations is called the skein algebra of F , denoted by $S(F)$. It is a non-commutative deformation of the $SL(2, \mathbb{C})$ -character variety of F , of significant importance to quantum topology. In particular, for F with boundary, it is (almost) the quantum Teichmuller space of F . Except for a few simplest surfaces F , not much is known about the algebraic properties of $S(F)$ for closed F . We are going to prove the following two fundamental properties of skein algebras: 1. $S(F)$ has no zero divisors, 2. Away from roots of unity, the center of $S(F)$ is composed of polynomials in knots parallel to boundary components of F . This is joint work with J. H. Przytycki.

Date: Friday, December 4th, 2015

Time: 2:30-3:30pm

Place: 4106 Exploratory Hall

For special accommodations, please contact Sean Lawton via email at slawton3@gmu.edu.