Meeting: 1002, Pittsburgh, Pennsylvania, SS 1A, Special Session on Invariants of Knots and 3-Manifolds

1002-55-125 **Michael McLendon*** (mmclendon2@washcoll.edu), Washington College, 300 Washington Avenue, Chestertown, MD 21620. *Traces on the skein algebra of the torus.*

For a surface F, the Kauffman bracket skein module of $F \times [0,1]$, denoted $K(F)$, admits a natural multiplication which makes it an algebra. When specialized at a complex number t, non-zero and not a root of unity, we have $K_t(F)$, a vector space over $\mathbb{C}$. In this talk, we will use the product-to-sum formula of Frohman and Gelca to show that the vector space $K_t(T^2)$ has five linearly independent traces. One trace on $K_t(T^2)$ corresponds to the empty skein and the other four traces correspond to each of the four $\mathbb{Z}_2$ homology classes of the torus. (Received September 10, 2004)