

1125-46-1021 **Michael Brannan*** (mbrannan@math.tamu.edu) and **Benoit Collins**. *The dual Temperley-Lieb basis and quantum group integrals.*

The Temperley-Lieb algebras form a remarkable family of finite dimensional algebras, arising in a variety of contexts, including quantum groups, subfactors, knot theory, and topological quantum computation. In this talk, I will discuss an approach to computing the dual basis associated to the usual planar diagram basis in the Temperley-Lieb algebra. Our approach to this problem is to interpret this in terms of an equivalent problem of integrating polynomial functions with respect to the Haar measure over certain quantum groups. Using this new perspective, we derive a Laurent series expansion for the dual basis coefficients, and using this expansion we answer a question of Jones on the non-vanishing of such coefficients. We also deduce the non-vanishing of the coefficients of the Jones-Wenzl projections as a particular consequence. (Received September 14, 2016)