

## Normal Approximation for Jack measures

Louis H. Y. Chen  
National University of Singapore

### *Abstract*

The one-parameter family of Jack $_{\alpha}$  measures on partitions is an important discrete analog of Dyson's  $\beta$  ensembles of random matrix theory. Except for  $\alpha = \frac{1}{2}, 1, 2$ , which have group theoretic interpretations, the Jack $_{\alpha}$  measure is difficult to analyze. In this talk, we present results on both uniform and non-uniform error bounds in the central limit theorem for the Jack $_{\alpha}$  measure for  $\alpha \geq 1$ . Our results improve those in the literature and come close to solving a conjecture of Fulman (2004). This talk is based on joint work with Le Van Thanh.