

1025-60-111

**Elizabeth Meckes\*** ([esmeckes@math.cornell.edu](mailto:esmeckes@math.cornell.edu)), Department of Mathematics, 310 Malott Hall, Cornell University, Ithaca, NY 14853-4201. *Random Orthogonal Matrices and Gaussian Matrices.*

A common theme in results on random (Haar-distributed) orthogonal matrices is that such matrices behave like Gaussian random matrices in many ways. I will discuss various types of quantitative results in this direction; in particular, I will focus on lower-dimensional projections of Haar measure on  $O(n)$ . The results in this direction are proved via Stein's method of exchangeable pairs, and I will give a brief outline of the proofs. (Received January 18, 2007)