

1108-60-550

S. Ng and **M. Walters*** (mwalter4@u.rochester.edu), Department of Mathematics, University of Rochester, 500 Joseph Wilson Blvd., Rochester, NY 14627. *Random Operator Compressions*.

Let A be a Hermitian operator of order n . We show that for $k \leq n$ sufficiently large, the eigenvalues of a compression of A to a k -dimensional subspace are almost the same for all subspaces. We prove this result using the methods introduced in a paper by Chatterjee and Ledoux on eigenvalues of principle submatrices. We show that by choosing an appropriate Markov chain, the methods of Chatterjee and Ledoux can be applied to give a more general result on operator compressions. As an additional application of this method, we prove concentration of measure of the length of the longest increasing subsequence of a random walk distributed under the invariant measure for the asymmetric exclusion process (Received January 20, 2015)