1135-81-1689 **Houssam Abdul-Rahman*** (houssam@math.arizona.edu), 617 N. Santa Rita Ave., Tucson, AZ 85721-0089. *Entanglement of a class of non-Gaussian states in disordered harmonic oscillator systems.*

For disordered harmonic oscillator systems over the d-dimensional lattice, we consider the problem of finding the bipartite entanglement of the uniform ensemble of the energy eigenstates associated with a particular number of modes. Such ensemble define a class of mixed, non-Gaussian entangled states that are labeled, by the energy of the system, in an increasing order. We develop a novel approach to find the exact logarithmic negativity of this class of states. We also prove entanglement bounds and demonstrate that the low energy states follow an area law. (Received September 24, 2017)