**An investigation in the entanglement of scalable symmetric Gaussian systems**

Kao, Jhih-Yuan and Chou, Chung-Hsien

Department of Physics, National Cheng Kung University, Tainan 70101, Taiwan

**Abstract**

Here I am going to show some aspects of the entanglement of symmetric and bisymmetric Gaussian pure states-and disentanglement thereof. Because of symmetry, we are able to scale the particle number (or, the number of modes) and thus scrutinize how the entanglement behaves under such a change. In addition, put under a bilinear Hamiltonian, we can observe the evolution of entanglement, where we can see how different system factors play their roles.

Reference: Jhih-Yuan Kao and Chung-Hsien Chou, New J. Phys. 18(2016) 073001