1134-46-290 **Eric A Carlen*** (carlen@math.rutgers.edu), Hill Center, 110 Frelinghusen Rd, Piscataway, NJ 08854-8019. *Entropy dissipation in quantum many particle systems.*

Recent joint work with Jan Maas has shown that quantum Markov semigroups satisfying one of the natural notions detailed balance are gradient flow for the relative entropy with respect to a natural analog of the classical 2-Wasserstein transport metric, and that this approach provides an effective means for proving sharp dissipation inequalities, just as in the classical case. This is applied here in the context of some simple quantum many particle systems. (Received September 10, 2017)