1145-82-1653   **Bruno Nachtergaele**, **Robert Sims** and **Amanda Young*** (`amyoung@math.arizona.edu`).
Lieb-Robinson bounds and conditional expectations for lattice fermion systems.

Lieb-Robinson bounds have proved a powerful tool for expressing locality properties of both static and disordered quantum spin systems. In this talk, we consider (static) lattice fermion systems, and discuss how to obtain Lieb-Robinson bounds in this context. One of the main difficulties in this setting is that spatially separated observables do not necessarily commute as they do in the tensor product structure of quantum spin systems. In addition, we will describe a class of conditional expectations that can be used to well-approximate dynamically evolved observables by strictly local ones. (Received September 23, 2018)