1085-82-200 **Eman Hamza*** (emanhamza@sci.cu.edu.eg), **Robert Sims** and **Günter Stolz**. *Lieb Robinson bounds in disordered quantum spin systems.*

In the past few years, Lieb-Robinson bounds have been shown to be powerful tools in turning the inherent locality of quantum spin systems into useful estimates to study dynamics as well as properties of ground states.

In this work we show that for general systems with short range interactions, zero velocity Lieb Robinson bound implies exponential decay of ground state correlations, up to an explicit correction. We also give an example of a system satisfying such bound, namely the isotropic xy chain in random exterior magnetic field. (Received September 10, 2012)