Title: Locality in Quantum Spin Systems Robert Sims

Abstract: Quantum Spin Systems are a convenient model of many-body quantum mechanics. In many cases, they are simple enough to be tractable, however, they are also rich enough in structure to capture intriguing phenomena; for example, phase transitions. In this lecture, I will introduce the notion of quantum spin systems and discuss results concerning locality of the dynamics. This later topic, commonly referred to as Lieb-Robinson bounds, has been at the heart of many recent developments in the field.