

Joint Quantum Institute Seminar  
February 11, 2008 at 12:30  
Physics 1201

**Jake Taylor**  
“Metrology, communication, and computation  
with small quantum systems”  
MIT

Experimental approaches to implementing ideas from quantum information science focus on developing well-understood physical systems that have only a few quantum bits. I will discuss potential applications of these small quantum systems, ranging from high-resolution magnetic field sensing to generating entangled pairs at long distances to large-scale quantum information processing. By relying upon proven technologies, we can take full advantage of the tremendous experimental advances in preparing, controlling, and measuring isolated mesoscopic and atomic systems made over the past decade.

Host UMD: Eite Tiesinga/Chris Monroe