Abstract:

Fine-grained complexity utilizes a small set of conjectures to derive conditional lower bounds for a large collection of problems. These conjectures concern the time complexity of a few core problems such as k-SAT, Orthogonal Vectors, 3SUM, k-Clique, and Set Cover. The relationships between these conjectures are poorly understood.

This talk will discuss some connections between the conjectures, including a tight reduction from Weighted-k Clique to Orthogonal Vectors and new (quantum-inspired) findings about the Set Cover Conjecture.