Final Project Ideas

February 20, 2017

Survey topics:

- The Unique Games Conjecture.

- Pseudorandom generators.

- Quantum Computing.

- Parameterized Complexity, the **W** hierarchy.

- Descriptive Complexity.

- **PPAD**, **PLS**, **CLS**, or other subclasses of **TFNP**.

- Circuit Complexity Lower Bounds (**ACC** $\neq$ **NEXP**).

- Kolmogorov Complexity.

- Geometric Complexity Theory.

- The Exponential Time Hypothesis (ETH) or the Strong Exponential Time Hypothesis (SETH).