

6.851 ADVANCED DATA STRUCTURES (SPRING'14)

Prof. Erik Demaine TAs: Timothy Kaler, Aaron Sidford

Problem 5 *Due: Monday, March 17th*

Be sure to read the instructions on the assignments section of the class web page.

Cache-Oblivious Rectangle Intersection Counting

Given a set of N axis-parallel rectangles, design and analyze a cache-oblivious algorithm for counting the number of intersecting pairs of rectangles. Your algorithm should run in $O(\frac{N}{B} \log_{M/B} \frac{N}{B})$ time in the cache-oblivious model.