Session 26
Strategy 3: Divide-and-Conquer

Lecture Summary

Rather than algorithm implementation details (left for students as exercise), lecture focuses on understanding solution enough to: a) illustrate divide-conquer, b) determine performance of resulting algorithm, and 3) attempt a pseudocode for at least one of the problems, see P20.

Divide-Conquer Convex Hull and Closest Pair

1. Solution outline: basic procedure (to repeat), and recursive (repetition) structure
   - Key simplifying observations/results
   - Implementation of geometric operations
   - Steps outline
2. Performance compared to brute force solutions

Session Exercise

P20. ★Do 🕮 Exercise 5.5: 4 or 10. (One will be picked in class)

🕮 **Exercise 5.5** • 7, 8, 9 🛠 *12

Activity ◎ Use visualization web links from course website to study divide-conquer closest pair and convex hull.

Reading List

🕮 5.5

Keywords

Lower/upper hull, quickhull