

<i>Method</i>	<i>Work</i>	<i>Time</i>	<i>Expected?</i>	<i>Notes</i>
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SEARCHING

Parallel Srch

CREW algo w p processors in T: $\log(n+1)/\log(p+1)$
and W: $p \cdot \log(n+1)/\log(p+1)$

Adversary Arguments

Introduction to adversary args via list search

Two models of parallel computation

Lower bound on searching

FIND MAX

CREW Max

n logn

Uses prefix sums or view as binary tree

CRCW Max

n^2 1
n loglogn

Compare all to all

Use accelerated cascading

Lower Bound

loglogn

Using $p \leq n$ processors
this is also adversary argument

SELECTION

Parallel Select

n logn loglogn

Based on the sequential algorithm

uses pipelined mergesort

Implications for selection of lower bound on max