Scheduling of Parallel Applications

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Goal

How to build efficient parallel applications?
Greedy schedules are bad

CPU 1
A
B

CPU 2
C

Optimal schedule

25% slower!

CPU 1
A C B A C B C

CPU 2
B A C B A C

Greedy round-robin schedule
Work automata

\[
\begin{align*}
0, x = 2 & \quad \text{to} \quad \emptyset, x = 2 \\
\{a\}, x \leq 2 & \quad \text{to} \quad \{a\}, x \leq 2 \\
\emptyset, x = 2 & \quad \text{to} \quad 0, x = 2
\end{align*}
\]
Scheduling games
Thanks for listening. Questions?