

Design Tradeoffs

CL8



Optimizing metrics

- area
- throughput
- latency
- power consumption
- energy of executing a task

Performance / Cost Analysis

$$\hookrightarrow g(n) = \Theta(f(n))$$

$$\hookrightarrow g(n) = \Theta(f(n)) \text{ if } \exists c_2 \geq c_1 > 0 \text{ s.t.}$$

$\forall n$ (but finitely many):

$$c_1 \cdot f(n) \leq g(n) \leq c_2 \cdot f(n)$$

$$g(n) = O(f(n))$$