

# CS 672 – Modeling Multiprocessors

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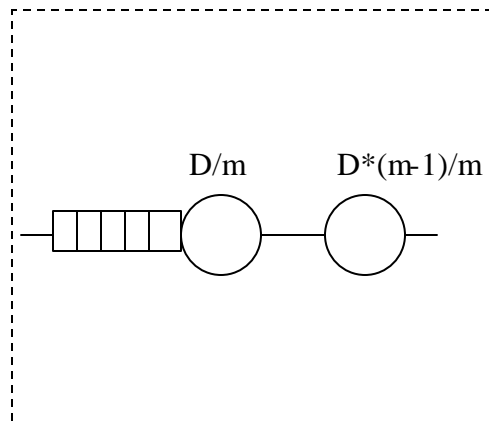
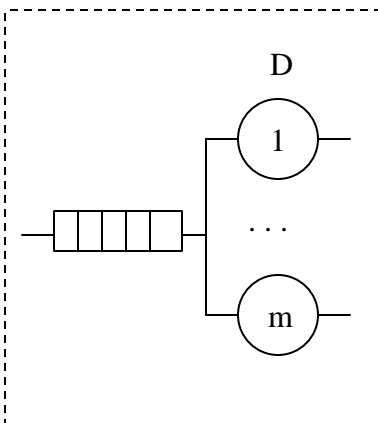
<http://www.cs.gmu.edu/faculty/menasce.html>

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## Approximation for Multiprocessors

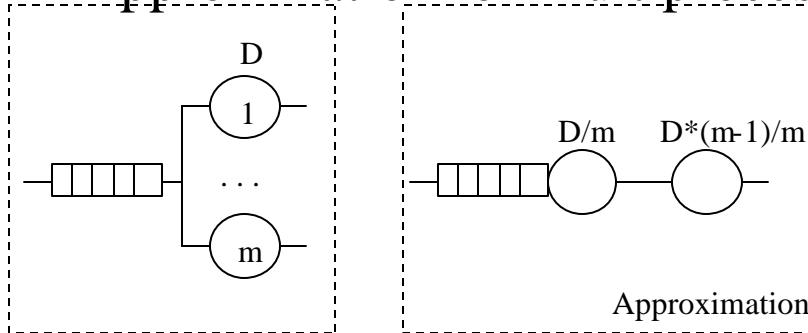


Approximation

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## Approximation for Multiprocessors



- Light load (no queue): total time spent at original queue =  $D$ . Total time spent at approximation =  $(D + D^*m - D)/m = m^*D/m = D$ .
- Heavy load (all resources are busy): multiple resource queue behaves as single resource that works  $m$  times faster. The time spent at the queue dominates the time spent at the delay server.