

CMPE 230 Class Project

Marc Mosko

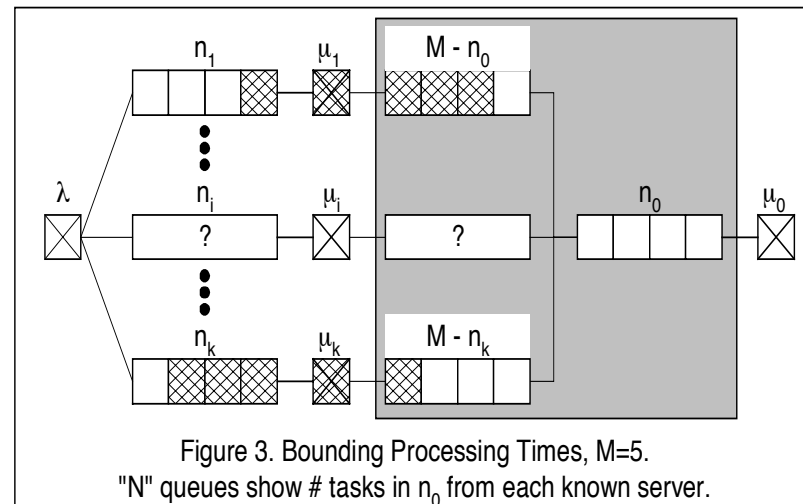
Ovid Jacob

Overview

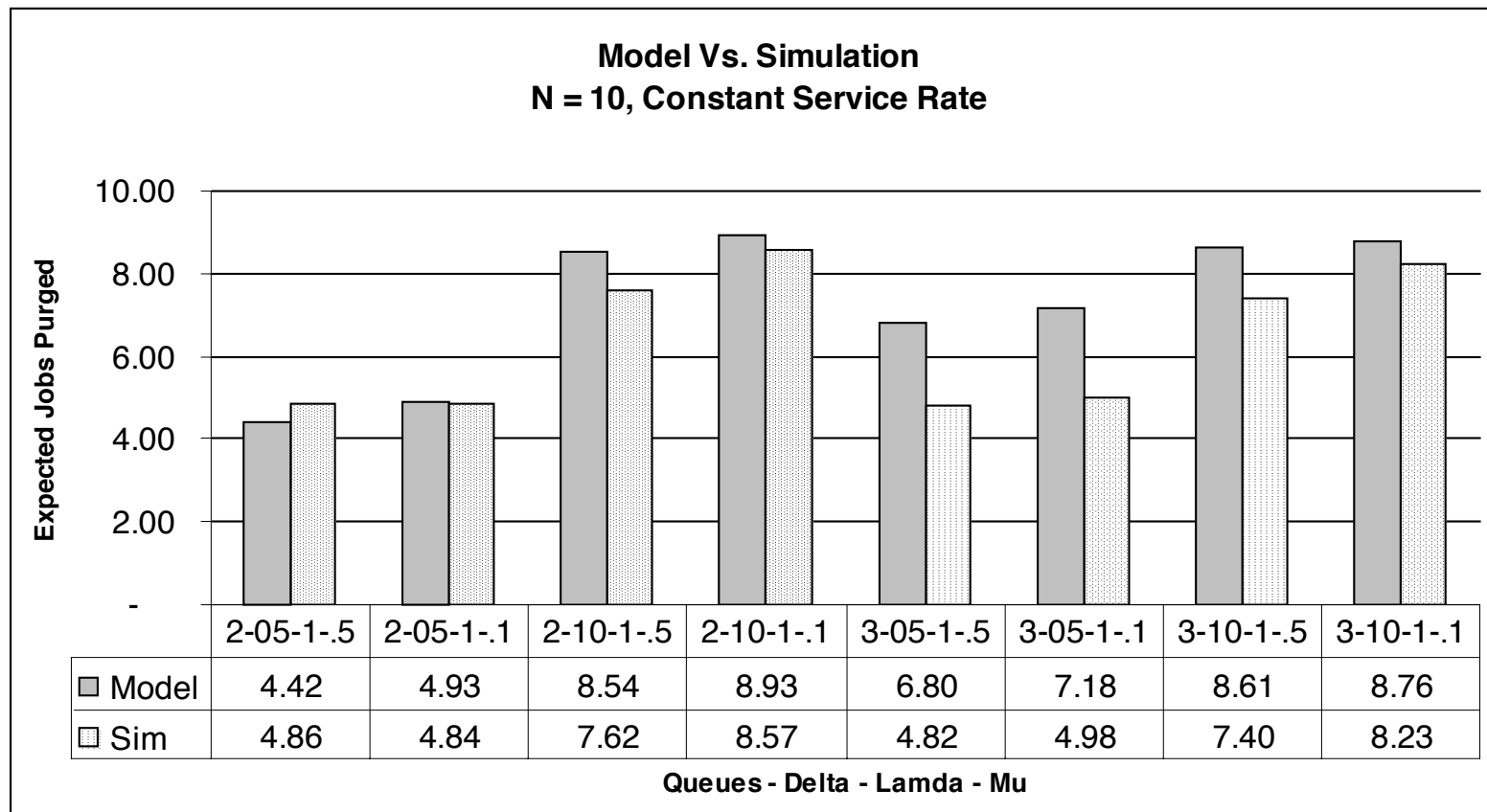
- Fork/Join model.
- Create Markov Continuous-Time transition matrix with three degrees.
 - Number in “fastest”, “slowest” and join queues.
 - Estimate completions from intermediate servers via *m-Erlang* distributions.
- Solve Q matrix via LU decomposition and equation substitution.

State Example

- Only track 3 queues
 - Smaller dependence on number of servers.
 - Only 5 transitions in Markov chain. Low number of equations.



Results vs. Simulation I



Results vs. Simulation II

