

SCIENCES

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Queuing Theory and Applications, Subject Head – Vladimir Anisimov

Queueing Theory 1

Advanced Trends

Coordinated by
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Nikolaos Limnios

Color section

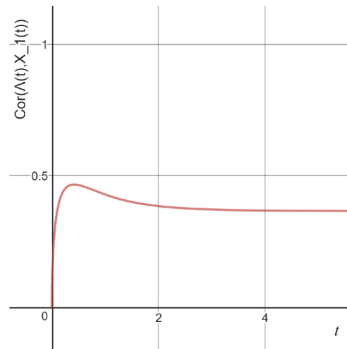


Figure 5.1. $\text{Cor}(\Lambda(t), X_{i1}(t))$ for $\mu_1 = 1$, $\gamma = 2$ and $D_\Lambda = 2$

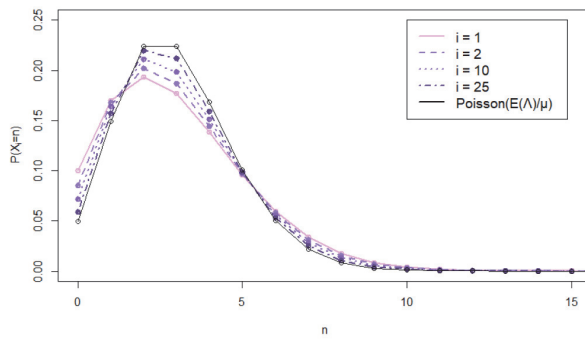


Figure 5.2. Estimated distribution of X_i for several phases i , with $\Lambda \sim U(0, 6)$ and $\gamma = \mu = 1$

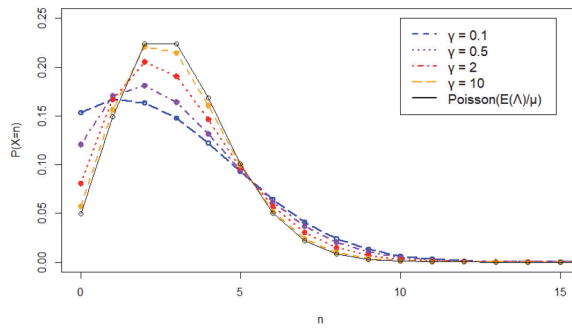


Figure 5.4. Estimated distribution of X for different values of γ , with $\Lambda \sim U(0, 6)$ and $\mu = 1$

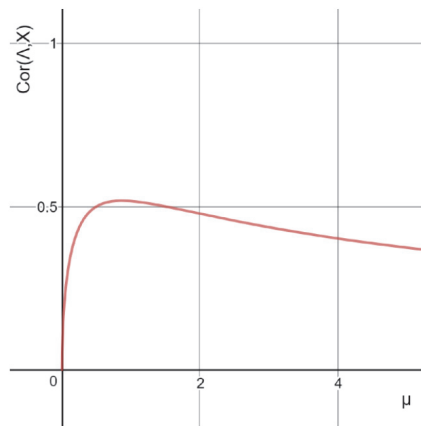


Figure 5.5. $\text{Cor}(X, \Lambda)$ for $D_\Lambda = 1$ and $\gamma = 0.5$

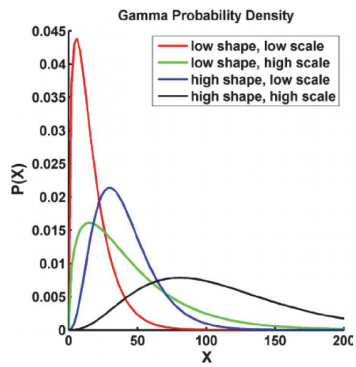


Figure 8.2. Density function of the gamma distribution

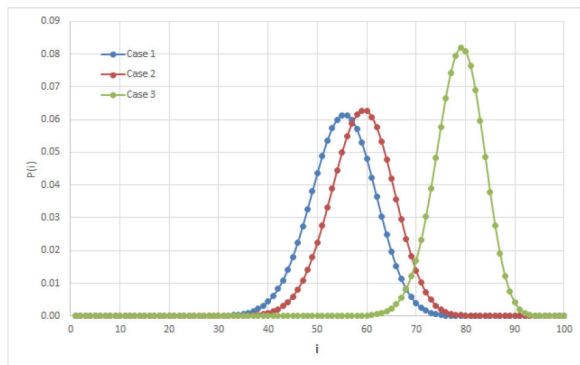


Figure 8.4. Steady-state distributions

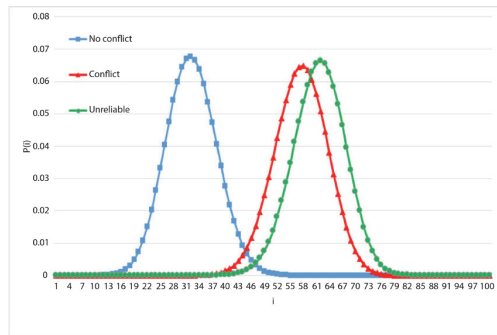


Figure 8.7. Reliable no conflict, reliable with conflict, and unreliable with conflict

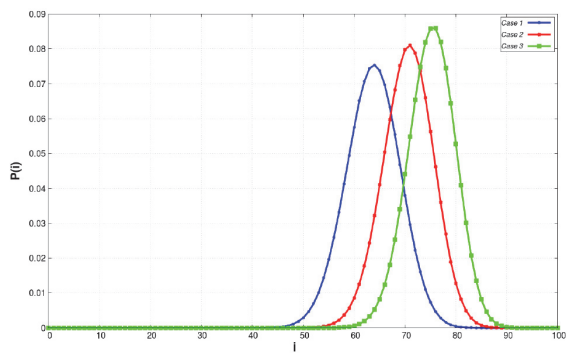


Figure 8.8. Comparison of steady-state distributions

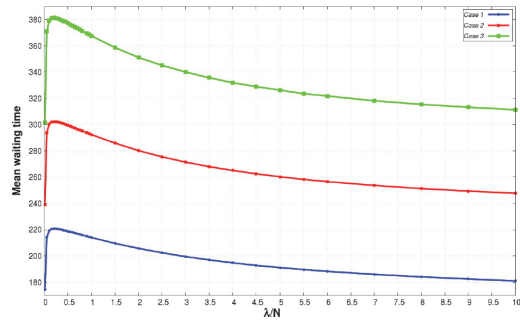


Figure 8.9. Mean waiting time versus intensity of incoming customers

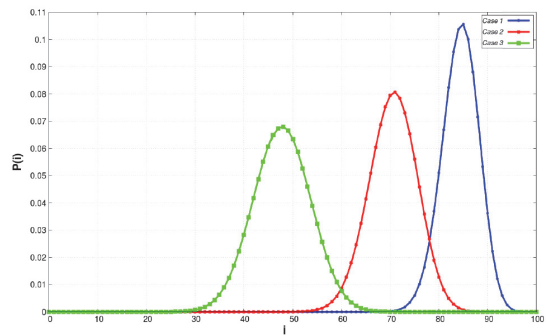


Figure 8.10. Steady-state distributions of gamma distributed interarrival times

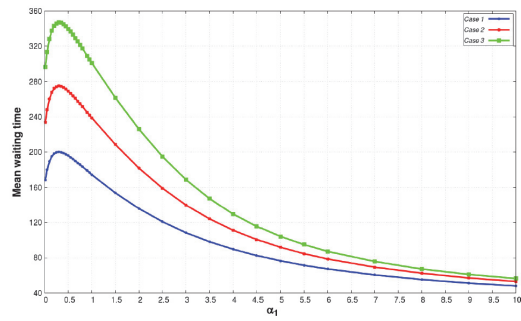


Figure 8.11. Mean waiting time versus shape parameter

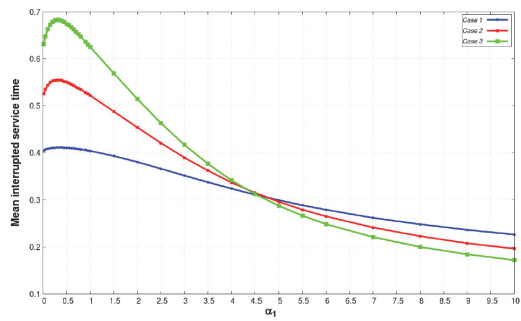


Figure 8.12. Mean interrupted service time versus shape parameter

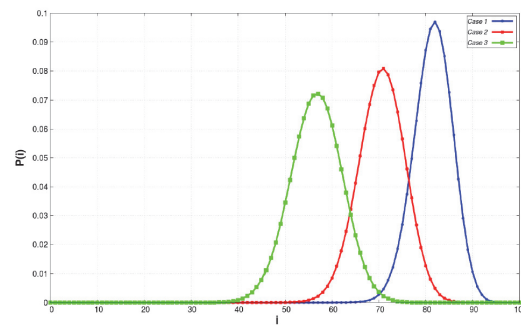


Figure 8.13. Steady-state distributions of gamma distributed retrial times

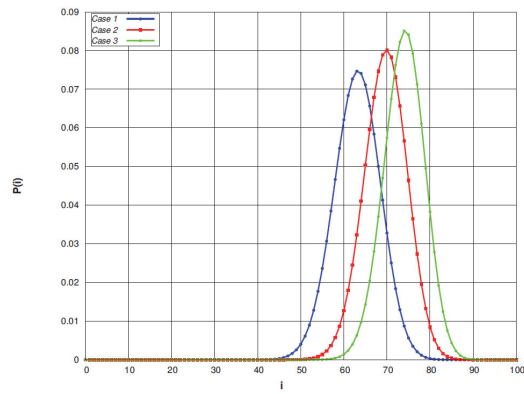


Figure 8.14. Comparison of steady-state distributions for mode 2

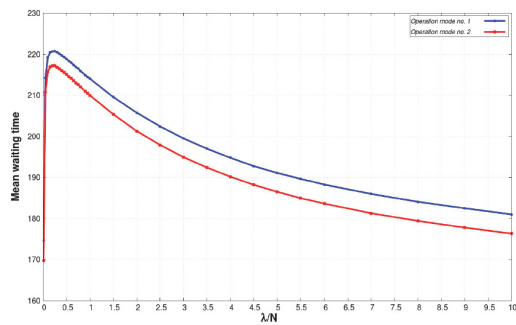


Figure 8.15. Mean waiting time versus intensity of incoming customers of Case 1

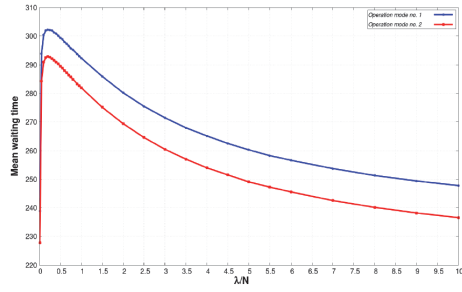


Figure 8.16. Mean waiting time versus intensity of incoming customers of Case 2

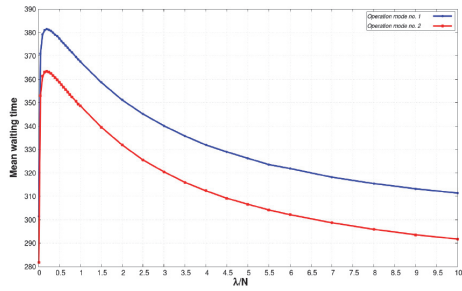


Figure 8.17. Mean waiting time versus intensity of incoming customers of Case 3

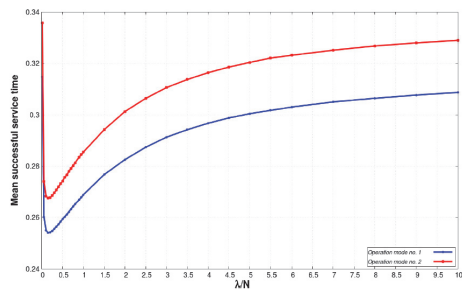


Figure 8.18. Mean successful service time versus intensity of incoming customers of Case 1

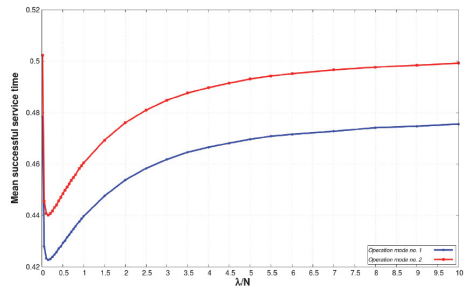


Figure 8.19. Mean successful service time versus intensity of incoming customers of Case 2

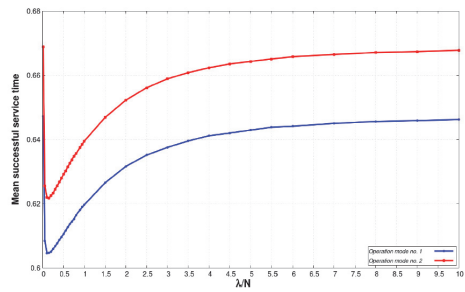


Figure 8.20. Mean successful service time versus intensity of incoming customers of Case 3

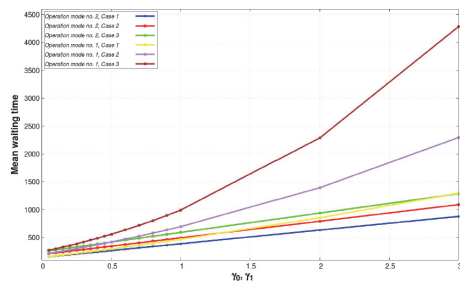


Figure 8.21. Mean waiting time versus intensity of failure rate

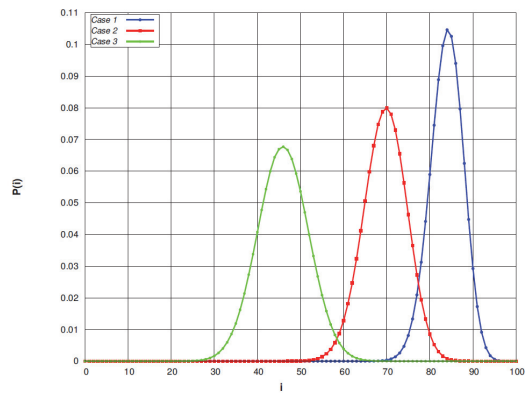


Figure 8.22. Steady-state distributions of scenario B

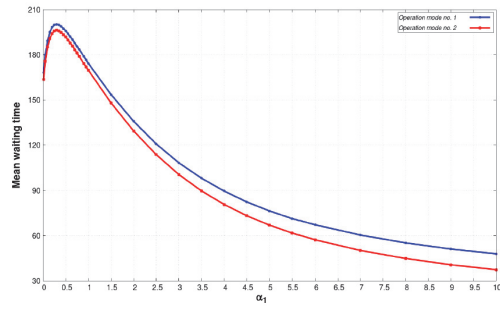


Figure 8.23. Mean waiting time versus shape parameter, $\alpha = \beta = 0.5$

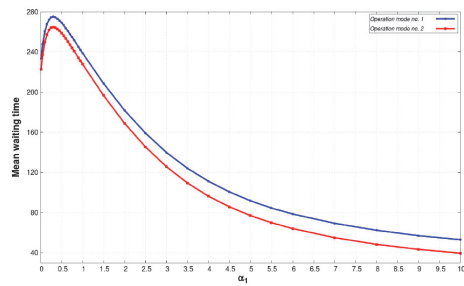


Figure 8.24. Mean waiting time versus shape parameter, $\alpha = \beta = 1$

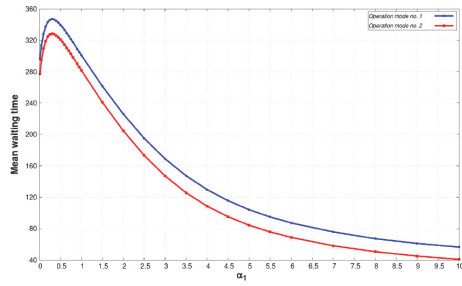


Figure 8.25. Mean waiting time versus shape parameter, $\alpha = \beta = 2$

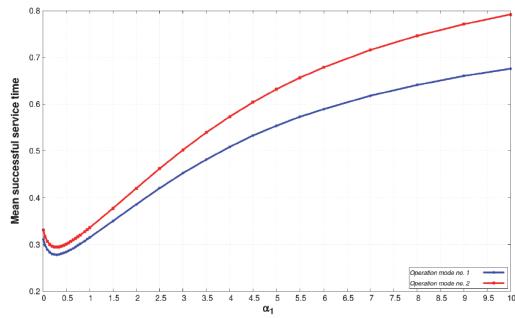


Figure 8.26. Mean successful service time versus shape parameter, $\alpha = \beta = 0.5$

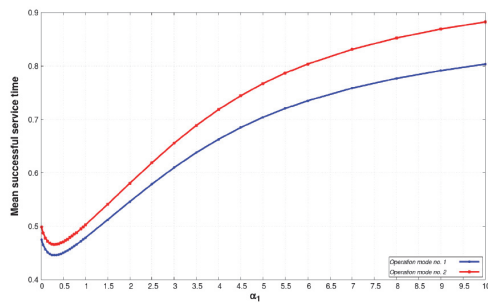


Figure 8.27. Mean successful service time versus shape parameter, $\alpha = \beta = 1$

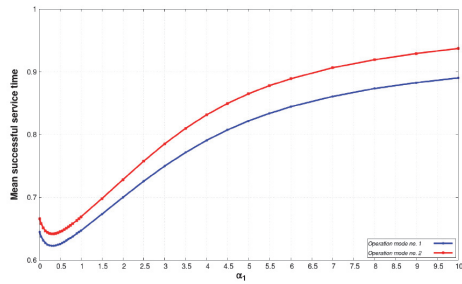


Figure 8.28. Mean successful service time versus shape parameter, $\alpha = \beta = 2$