Curriculum Vitae

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EDUCATION

- **Ph.D. Operations Research**, Florida Institute of Technology, Operations Research Program, Melbourne, FL 32901, U.S.A., June 1993.
  <u>Advisor</u>: Dshalalow, J.H.

- **M.S. Applied Mathematics**, Carnegie-Mellon University, Department of Applied Mathematics, Pittsburgh, PA 15213, U.S.A., August 1986.
  <u>Advisor</u>: Kannan, R.

- **B.S. Mathematics** (Operations Research), Université des Sciences et de la Technologie Houari Boumediène, Department of Mathematics, Algiers, Algeria, June 1983.

REFEREEING FOR

- *Journal of Applied Mathematics and Stochastic Analysis*,

- *Mathematical and Computer Modelling*,

- *Applied Mathematical Modelling*,

- *International Journal of Systems Science*,

- *Soochow Journal of Mathematics*,

- *Journal of King Saud University* (*Science*),

- *TOP* (Journal of the Spanish Society of Statistics and OR),

- *Journal of the Operational Research Society*,

- *Annals of Operations Research*,

- *Production Planning and Control*,

- *Computers & Industrial Engineering*,

- *Journal of Probability and Statistical Sciences*,

- *Physica A*,

- *International Journal of Operations Research*,

- *Engineering Simulation*,

- *European Journal of Operational Research*,

- *Quality Technology and Quantitative Management,*

- *King Khalid University Journal of Science,*

- *Mathematics and Computers in Simulation,*

- *Applied Stochastic Models in Business and Industry,*

- *Stochastics and Stochastics Reports,*

- *Mathematical Methods in the Applied Sciences.*

RESEARCH INTERESTS

- *Queueing Theory*
- *Optimal Control*
- *Statistical Inference*
- *Stochastic Processes*
- *Inventory Theory*

PUBLICATIONS

- *Theses*

  1. **Tadj, L**. (1993). Queueing Systems with Random Server Capacity and System Dependent Service Delay. (Ph.D. Dissertation)

  2. **Tadj, L**. (1986). The Lovàsz Basis Reduction Algorithm and the Subset Sum Problem. (M.S. Thesis)

- *Refereed Papers*

  1. Dshalalow, J.H. and **Tadj, L**. (1992). Queueing system with a fixed accumulation level, random server capacity, and capacity dependent service time, *International Journal of Mathematics and Mathematical Sciences*, Vol. **15**, No. 1, 189-194.

  2. Dshalalow, J.H. and **Tadj, L**. (1993). A queueing system with random server capacity and multiple control, *Queueing Systems*, Vol. **14**, 369-384.

  3. Dshalalow, J.H. and **Tadj, L**. (1993). On applications of first excess level random processes to queueing systems with random server capacity and capacity dependent service time, *Stochastic and Stochastic Reports*, Vol. **45**, 45-60.

  4. **Tadj, L**. (1993). On a bulk queueing system with random server capacity and multiple control, *Engineering Simulation*, Vol. **11**, No. 1, 1-17.

  5. **Tadj, L**. (1993). Converge 3.0, software for algebra through calculus: A software review, *Journal of Applied Mathematics and Stochastic Analysis*, Vol. **6**, No. 3, 281-286.

  6. **Tadj, L**. (1995). Waiting in line: Intro to queueing theory, *IEE Potentials*, Vol. **14**, No. 5, 1995.

  7. Benkherouf, L., Aggoun, L., and **Tadj, L**. (1997). A note on a stochastic inventory model for deteriorating items, *Dirasat*, Vol. **24**, No. 2, 242-244.

  8. Aggoun, L., Benkherouf, L., and **Tadj, L**. (1997). A hidden Markov model for an inventory system with perishable items, *Journal of Applied Mathematics and Stochastic Analysis*, Vol. **10**, No. 4, 423-430.

  9. Benkherouf, L., Aggoun, L., and **Tadj, L**. (1997). An integer-valued EOQ model with stochastic demand and perishable items, *Journal of Statistical Research*, Vol. **31**, No. 2, 77-84.

10. Aggoun, L., Benkherouf, L., and **Tadj, L**. (1997). Filtering of continuous time Markov chains, *Mathematical and Computer Modelling*, Vol. **26**, No. 12, 73-83.

11. **Tadj, L**., Benkherouf, L., and Aggoun, L. (1998). On a bulk queueing system with impatient customers, *Mathematical Problems in Engineering*, Vol. **3**, 539-554.

12. **Tadj, L**., Benkherouf, L., and Aggoun, L. (1998). An r-quorum queueing system with random server capacity and impatient customers under N-policy, *Arab Journal of Mathematical Sciences*, Vol. **4**, No. 1, 46-61.

13. **Tadj, L**., Benkherouf, L., and Aggoun, L. (1998). On a delayed service queueing system with random server capacity and impatient customers, *Applied Statistical Science III*, 309-328.

14. Aggoun, L., Benkherouf, L., and **Tadj, L**. (1999). A stochastic inventory model perishable and aging items, *Journal of Applied Mathematics and Stochastic Analysis*, Vol. **12**, No. 1, 23-29.

15. Benkherouf, L., Aggoun, L., and **Tadj, L**. (1999). On the optimal EOQ for a stochastic jump inventory model with deteriorating items, *Journal of Statistical Research*, Vol. **33**, No. 1, 1-8.

16. Aggoun, L., Benkherouf, L., and **Tadj, L**. (1999). Optimal adaptive estimators for partially observed numbers of defective items in inventory models, *Mathematical and Computer Modelling*, Vol. **29**, 83-93.

17. **Tadj, L**., Benkherouf, L., and Aggoun, L. (1999). A hysteretic queueing system with random server capacity, *Computers and Mathematics with Applications*, Vol. **38**, 51-61.

18. Aggoun, L., Benkherouf, L., and **Tadj, L**. (2000). A stochastic jump inventory model with deteriorating items, *Stochastic Analysis and Applications*, Vol. **18**, No. 1, 1-10.

19. **Tadj, L**. and Rikli, N-E. (2000). Matrix analytic solution to a quorum queueing system, *Mathematical and Computer Modelling*, Vol. **32**, 481-491.

20. **Tadj, L**. (2000). Comparative study of $M/G^r/1$ and $M/G/r$ queueing systems, *Journal of King Saud University, Science (2)*, Vol. **12**, No. 2, 129-142.

21. Benkherouf, L., Aggoun, L., and **Tadj, L**. (2001). On a stochastic inventory model with deteriorating items, *International Journal of Mathematics and Mathematical Sciences*, Vol. **25**, No. 3, 197-203.

22. **Tadj, L**. (2001). On an $M^1,M^2/G^r/1$ queueing system, *Mathematical Problems in Engineering*, Vol. **6**, 495-503.

23. **Tadj, L**. (2001). A matrix analytic solution to a hysteretic queueing system with random server capacity, *Applied Mathematics and Computation*, Vol. **119**, 161-175.

24. **Tadj, L**. and Hamdi, A. (2001). Maximum entropy solution to a quorum queueing system, *Mathematical and Computer Modelling*, Vol. **34**, 19-27.

25. **Tadj, L**., Benkherouf, L., and Aggoun, L. (2001). A single-channel queueing system with multiple control, *Umm Al-Qura University Journal of Science - Medicine - Engineering*, Vol. **13**, No. 1, 1-17.

26. **Tadj, L**. and Tadj, C. (2002). Recursive solution to a quorum queueing system, *Mathematical and Computer Modelling*, Vol. **35**, 283-293.

27. Benkherouf, L. and **Tadj, L**. (2002). On an inventory model with time-varying demand in the face of sudden obsolescence, *Damascus University Journal For the Basic Sciences*.

28. Sarhan, A. and **Tadj, L**. (2003). Parameters estimation of a repairable system, *Applied Mathematics and Computation*, Vol. **138**, Issue 2-3, 217-226.

29. **Tadj, L**. and Tadj, C. (2003). On the departure process of a quorum queueing system, *Computers and Mathematics with Applications*, Vol. **45**, 655-664.

30. **Tadj, L**. (2003). A quorum queueing system under D-policy, *Applied Mathematics and Computation*, Vol. **144**, 325-336.

31. **Tadj, L**. and Ke, J-.C. (2003). Control policy of a hysteretic queueing system, *Mathematical Methods of Operations Research*, Vol. **57**, No. 3, 367-376.

32. **Tadj, L**. (2003). Explicit solution of a quorum queueing system, *Stochastic Analysis and Applications*, Vol. **21**, No. 3, 703-717.

33. Bounkhel, M., **Tadj, L**., and Hamdi, A. (2003). Iterative schemes to solve nonconvex variational problems, *Journal of Inequalities in Pure and Applied Mathematics*, Vol. **4**, No. 1, Article 14.

34. **Tadj, L**. (2003). On a quorum queueing system under T-policy, *Journal of the Operational Research Society*, Vol. **54**, 466-471.

35. **Tadj, L**. and Sarhan, A. (2003). Effect of the server capacity distribution on the optimal control of a bulk service queueing system, *Chaos, Solitons & Fractals*, Vol. **18**, Issue 5, 1101-1110.

36. **Tadj, L** and Touzene, A. (2003). A QBD approach to evolutionary game theory, *Applied Mathematical Modelling*, Vol. **27**, No. 11, 913-927.

37. **Tadj, L**. and Tadj, C. (2003). On an $M/D^r/1$ queueing system, *Journal of Statistical Theory and Applications*, Vol. **2**, No. 1, 17-32.

38. **Tadj, L**. (2003). On a bilevel bulk queueing system under T-policy, *Journal of Statistical Research*, Vol. **37**, No. 2, 127-144.

39. Rikli, N-E. and **Tadj, L**. (2003). Effect of the server capacity distribution on the performance of a quorum queueing system, *Journal of Statistical Research*, Vol. **37**, No. 2, 279-289.

40. Hedjar, R., Bounkhel, M. and **Tadj, L**. (2004). Predictive control of periodic-review production inventory systems with deteriorating items, *TOP*, Vol. **12**, No. 1, 193-208.

41. **Tadj, L**. and Ke, J-.C. (2005). Control policy of a hysteretic bulk queueing system, *Mathematical and Computer Modelling*, Vol. **41**, 571-579.

42. Bounkhel, M., **Tadj, L**., and Benhadid, Y. (2005). Optimal control of a production system with inventory-level-dependent demand, *Applied Mathematics E-Notes (AMEN)*, Vol. **5**, 36-43.

43. Bounkhel, M. and **Tadj, L**. (2005). Optimal control of deteriorating production inventory systems, *Applied Sciences (APPS)*, Vol. **7**, No. 1, 30-45.

44. Hedjar, R., Bounkhel, M. and **Tadj, L**. (2005). Receding horizon control of a hybrid production system with deteriorating items, *Nonlinear Analysis: Special Series on Hybrid Systems and Applications*, Vol. **63**, 405-422.

45. **Tadj, L**. and Choudhury, G. (2005). Optimal design and control of queues, *TOP*, Vol. **13**, No. 1, 359-414.

46. **Tadj, L**. (2005). Alternative solution of a quorum queueing system, *Stochastic Analysis and Applications*, Vol. **24**, No. 2, 359-365.

47. **Tadj, L**., Choudhury, G., and Tadj, C. (2006). A quorum queueing system with a random setup time under N-policy and with Bernoulli vacation schedule, *Quality Technology & Quantitative Management*, Vol. **3**, No. 2, 145-160.

48. **Tadj, L**., Choudhury, G., and Tadj, C. (2006). A bulk quorum queueing system with a random setup time under N-policy and with Bernoulli vacation schedule, *Stochastics: An International Journal of Probability and Stochastics Processes*, Vol. **78**, No. 1, 1-11.

49. Bounkhel, M. and **Tadj, L**. (2006). Minimizing energy use for a road expansion in a transportation system using optimal control theory, *Applied Mathematics E-Notes (AMEN)*, Vol. **6**, 159-166.

50. **Tadj, L**., Bounkhel, M., and Benhadid, Y. (2006). Optimal control of production inventory systems with deteriorating items, *International Journal of Systems Science*, Vol. **37**, No. 15, 1111-1121.

51. Sarhan, A. and **Tadj, L**. (2006). Parameters estimations of a Weibull model using dependent masked data, *International Journal of Applied Mathematics*, Vol. **19**, No. 1, 105-124.

52. Dshalalow, J.H., Kim, S., and **Tadj, L**. (2006). Hybrid queueing systems with hysteretic bilevel control policies, *Nonlinear Analysis: Special Series on Hybrid Systems and Applications*, Vol. **65**, No. 11, 2153-2168.

53. Choudhury, G., **Tadj, L**., and Paul, M. (2007). Steady state analysis of an $M^X/G/1$ queue with two phase service and Bernoulli vacation schedule under multiple vacation policy, *Applied Mathematical Modelling*, Vol. **31**, 1079-1091.

54. Hedjar, R., Bounkhel, M., and **Tadj, L**. (2007). Self-tuning optimal control of periodic-review production inventory systems with deteriorating items, *Advanced Modeling and Optimization*, Vol. **9**, No. 1, 91-104.

55. Al-Khedhairi, A.I. and **Tadj, L**. (2007). Optimal control of a production inventory system with Weibull distributed items deterioration, *Applied Mathematical Sciences*, Vol. **1**, No. 35, 1703-1714.

56. Nowibet, K. and **Tadj, L**. (2007). A quorum queueing system with Bernoulli vacation schedule and restricted admission, *Advanced Modeling and Optimization*, Vol. **9**, No. 1, 171-180

57. Foul, A. and **Tadj, L**. (2007). Optimal control of a hybrid periodic-review production inventory system with disposal, *International Journal of Operational Research*, Vol. **2**, No. 4, 481-494.

58. Al-Gohary, A., **Tadj, L**., and Al-Rahma, A. (2007). Optimal control of a stochastic production planning model with different demand rates, *International Journal of Applied Mathematics* (to appear).

59. Foul, A., Djemili, S., and **Tadj, L**. (2007). Optimal and self-tuning optimal control of a periodic-review hybrid production inventory system, *Nonlinear Analysis: Special Series on Hybrid Systems and Applications* (to appear).

60. **Tadj, L**. and Ke, J-.C. (2007). A hysteretic bulk quorum queue with a choice of service and optional re-service, *Quality Technology & Quantitative Management* (to appear).

61. Al-Khedhairi, A.I. and **Tadj, L**. (2007). A bulk service queue with a choice of service and re-service under Bernoulli schedule, *International Journal of Contemporary Mathematical Sciences* (to appear).

- *Submitted Papers*

  1. **Tadj, L**., A production inventory model with deteriorating items in the face of sudden obsolescence.

  2. **Tadj, L**., On an integrated production inventory model with deteriorating items.

  3. Bounkhel, M., **Tadj, L**., and Benhadid, Y., Optimal control of deteriorating production systems with stock-dependent demand and with or without backorders.

  4. Bounkhel, M., Hedjar, R., and **Tadj, L**., Nonlinear receding horizon control of production inventory systems with deteriorating items.

  5. El-Gohary, A., **Tadj, L**., and Al-Rasheedi, A., Using optimal control to adjust the production rate of a deteriorating inventory system.

  6. Choudhury, G., **Tadj, L**., and Paul, M., Batch arrival queue with a random setup time under Bernoulli vacation schedule.

  7. **Tadj, L**. and Tadj, C., Optimal control of a bulk queueing system.

8. Balkhi, Z. and **Tadj, L**., A generalized EOQ model with deteriorating items and time varying demand, deterioration, and costs.

9. Bouras, A., Foul, A., and **Tadj, L**., Optimal and self-tuning control of an advertising production system with deteriorating items.

10. Foul, A., **Tadj, L**., and Hedjar, R., Adaptive control of inventory systems with unknown deterioration rate.

11. **Tadj, L**., Viewpoint. Letter to the editor in chief of the *International Journal of Operational Research*.

12. **Tadj, L**., A.M. Sarhan, and A. Al-Gohary, Optimal control of an inventory system with ameliorating and deteriorating items.

13. **Tadj, L**., Zhang, Z.G., and Tadj, C., A queueing analysis of multi-purpose production facility's operations.

14. Aggoun, L. and **Tadj, L**., A partially observed hybrid production inventory system.

15. Al-Khedhairi, A.I., Sarhan, A.M., and **Tadj, L**., Estimation of the generalized Rayleigh distribution parameters.

16. Sarhan, A.M., **Tadj, L**., and S. Al-Malki, Estimation of the parameters of the generalized linear failure rate distribution.

17. Sarhan, A.M. and **Tadj, L**., Inference using record values from generalized exponential distribution with application.

18. Bounkhel, M. and **Tadj, L**., Optimal design of a bulk service queue.

- *Papers in Preparation*

  1. **Tadj, L**. and Foul, A., On an $M/G^r/1/K$ queueing system.

  2. **Tadj, L**. and AlZaid, A., Application of INAR(1) processes in queueing.

  3. **Tadj, L**. and Ba-Rukab, O., Quorum queueing systems in tandem.

  4. **Tadj, L**. and Amir, A., A diffusion approximation to a quorum queueing system.

  5. Tadj, C. and **Tadj, L**., Using neural networks for the optimal control of a quorum queueing system.

  6. **Tadj, L**., On the busy period of a quorum queueing system.

  7. Benhadid, Y., **Tadj, L**., and Bounkhel, M., Optimal control of production inventory systems with deteriorating items and dynamic costs.

  8. **Tadj, L.** and Kernane, T., Optimal management policy for a single and bulk service queue.

  9. Al-Khedhairi, A.I., Sarhan, A.M., and **Tadj, L**., Reliability equivalence factors of a general parallel-series system.

- *Books* (in arabic)

  1. Mossaad, A., Hamdi, A., and **Tadj, L**., *Introduction to Programming with BASIC*, Adwaa Al-Muntada, Riyadh 2003.

  2. Balkhi, Z., **Tadj, L**., and Bounkhel, M., *Introduction to Inventory Control*, King Saud University Press, Riyadh (2006).

  3. **Tadj, L**. and Sarhan, A., *Introduction to Stochastic Processes*, King Saud University Press, Riyadh (2007).

  4. **Tadj, L**. and Sarhan, A., *Introduction to Queueing Theory*, King Saud University Press, Riyadh (in preparation).

  5. **Tadj, L**., Balkhi, Z., and Benkherouf, L., *Introduction to Integer Programming*, King Saud University Press, Riyadh (in preparation).

6. Sarhan, A. and **Tadj, L**., *Introduction to Reliability Theory*, King Saud University Press, Riyadh (in preparation).

- *Chapter in Book* (under preparation)

  1. Hedjar, R. and **Tadj, L**., Various control schemes of the production planning problem, in *Applied Mathematical Modelling Research Trends*, ed. F. Columbus, Nova Science Publishers, Inc., Hauppauge, New York.