

John A. Muckstadt: Reports and Papers

1. "Scheduling in Power Systems." Doctoral Dissertation, College of Engineering, University of Michigan, 1966.
2. "An Application of Mixed-Integer Programming Duality to Scheduling Thermal Generating Systems." (with Richard C. Wilson) IEEE Transactions, Part III (PAS) December 1968, pp. 1968-1978.
3. "An Application of Duality Theory to Zero-One Integer Programs Having Convex Objective Functions." AFITSL Technical Report 6-69. Air University, Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, 1969.
4. "A Dual Decomposition Algorithm for Solving Mixed Integer-Continuous Quadratic Programming Problems." AFITSL Technical Report 7-69. Air University, Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, 1969.
5. "An Algorithm for Determining Optimal Stock Levels in a Multi-Echelon Inventory System." Air University, Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, 1971.
6. "A Model for a Multi-Item, Multi-Echelon, Multi-Indenture Inventory System." Management Science, Vol. 20, No. 4, December 1973, pp. 472-481.
7. "NAVMET: A Four-Echelon Model for Determining the Optimal Quantity and Distribution of Navy Spare Aircraft Engines." Report R-7511. Naval Weapons Engineering Support Activity, Washington Navy Yard, Washington, D.C., December 1975.
8. "An Application of Lagrangian Relaxation to Scheduling in Power Generation Systems." (with Sherri Koenig) Operations Research, Vol. 25, No. 3, May-June 1977, pp. 387-403. (An expanded version of this paper is included in a book entitled Studies in Operations Management, edited by A. Hax, North-Holland, Amsterdam, 1978.)
9. "On the Probability Distribution for Inventory Position in Two-Echelon Continuous Review Systems." School of Operations Research and Industrial Engineering Technical Report No. 336. Cornell University, Ithaca, NY, June 1977.
10. "Analysis of a Two-Echelon Inventory System in Which All Locations Follow Continuous Review (S,s) Policies." School of Operations Research and Industrial Engineering Technical Report No. 337. Cornell University, Ithaca, NY, June 1977.
11. "An Analysis of a Two-Echelon Inventory System." (with Paul Sasseville) School of Operations Research and Industrial Engineering Technical Report No. 361. Cornell University, Ithaca, NY, September 1977.
12. "Optimal Policy for Batch Operations: Backup, Checkpointing, Reorganization, and Updating." (with Guy Lohman) ACM Transactions on Data Base Systems, Vol. 2, No. 3, September 1977.

13. "Some Approximations in Multi-Item, Multi-Echelon Inventory Systems for Recoverable Items." Naval Research Logistics Quarterly, Vol. 25, No. 3, September 1978, pp. 377-393.
14. "Comments on 'Single Cycle Continuous Review Policies for Arborvescent Production Inventory Systems'." (with H. Singer) Management Science, Vol. 24, No. 16, December 1978, pp. 1766-1768.
15. "An Analysis of a Single Location Inventory Problem for Two Interchangeable Recoverable Items." (with D. Heath and C. Shilepsky) School of Operations Research and Industrial Engineering Technical Report No. 409, Cornell University, Ithaca, NY, February 1979.
16. "Coordination of Production Schedules with Shipping Schedules." (with W.L. Maxwell) Multi-Level Production/Inventory Systems: Theory and Practice, edited by L. Schwarz, Studies in the Management Sciences, Vol. 16, North Holland, NY, 1981.
17. "A Three-Echelon Inventory Model for Recoverable Items." Naval Research Logistics Quarterly, Vol. 26, No. 2, June 1979, pp. 199-221.
18. "Are Multi-Echelon Inventory Methods Worth Implementing in Systems with Low-Demand Rate Items?" (with L. Joseph Thomas) Management Science, Vol. 26, No. 5, May 1980, pp. 483-494.
19. "Cost Comparisons of Alternative Methods for Managing Multi-Level Inventory Systems: A Case Study." (with L. Joseph Thomas) Tijdschrift voor Economie en Management, Vol. XXV, No. 1, 1980. (This was an invited paper for a special issue on operations management, and is closely related to the preceding paper co-authored with L.J. Thomas.)
20. "An Examination of a Two-Echelon Inventory System for Recoverable Items When the Demand Process is Non-Stationary." RAND Corporation, Santa Monica, CA. N-1493-AF, 1980.
21. "A New Method for Determining Q and r in a Poisson Demand, Constant Procurement Lead-Time Inventory Model." (with M. Isaac) School of Operations Research and Industrial Engineering Technical Report No. 496, Cornell University, Ithaca, NY, March 1981.
22. "Analysis of an Inventory System with Due Dates." (with C. Shilepsky) School of Operations Research and Industrial Engineering Technical Report No. 505, Cornell University, Ithaca, NY, May 1981.
23. "An Analysis of Single Item Inventory Systems with Returns." (with M. Isaac) Naval Research Logistics Quarterly, Vol. 28, No. 2, June 1981, pp. 237-254.
24. "A Model for Planning Production in an N Stage System." (with W. Maxwell) School of Operations Research and Industrial Engineering Technical Report No. 508, Cornell University, Ithaca, NY, June 1981.

25. "Analysis of Inventory Systems for Substitutable Recoverable Items." (with D. Heath and C. Shilepsky) School of Operations Research and Industrial Engineering Technical Report No. 512, Cornell University, Ithaca, NY, August 1981.
26. "Economic Delivery Quantities for Capacitated Multi-Stage Production Systems." (with W.L. Maxwell and C.M. Delporte) School of Operations Research and Industrial Engineering Technical Report No. 517, Cornell University, Ithaca, NY, February 1982.
27. "On MRP Lot Sizing." (with J. McClain, W.L. Maxwell, L.J. Thomas, and F.N. Weiss) Management Science, Vol. 28, No. 5, May 1982, pp. 582-584.
28. "Design of Automatic Guided Vehicle Systems." (with W.L. Maxwell) IIE Transactions, Vol. 14, No. 2, June 1982, pp. 114-124.
29. "A Multi-Echelon Model for Indentured Consumable Items." School of Operations Research and Industrial Engineering Technical Report No. 548, Cornell University, Ithaca, NY, July 1982.
30. "Protective Stocks in Multi-Stage Production Systems." (with M. Lambrecht and R. Luyten) International Journal of Production Research, Vol. 22, No. 6, December 1984, pp. 1001-1025.
31. "Improving Inventory Productivity in Multi-Level Distribution Systems." (with L.J. Thomas) "Productivity and Efficiency in Distribution Systems," (Ed. D. Gautschi) North Holland, NY, 1983.
32. "Establishing Consistent and Realistic Reorder Intervals in Production-Distribution Systems." (with W.L. Maxwell) Operations Research, Vol. 33, No. 6, November-December 1985, pp. 1316-1341.
33. "The Inventory Cost Effectiveness of Group Technology Production Systems." (with T. Boucher) Annales de Sciences Economiques Appliquees, Vol. 39, No. 1, Universite Catholique de Louvain, 1983.
34. "A Modelling Framework for Planning and Control of Production in Discrete Parts Manufacturing and Assembly Systems." (with W.L. Maxwell, L.J. Thomas, and J. VanderEecken) Interfaces, Vol. 13, No. 6, December 1983, pp. 92-104.
 - a. "The Joint Replenishment Problem with a Powers-of-Two Restriction." (with P. Jackson and W.L. Maxwell), IIE Transactions, Vol. 17, No. 1, March 1985, pp. 25-32.
35. "Cost Estimating Methods for Evaluating the Conversion from a Functional Manufacturing Layout to Group Technology." (with T. Boucher) IIE Transactions, Vol. 17, No. 3, September 1985, pp. 268-276.
36. "Planning Component Delivery Intervals in Constrained Assembly Systems." In Axsater, S., C.H. Schneeweiss and E. Silver (Eds.), Multi-Stage Production Planning and Inventory Control, No. 262 in Lecture Notes in Economics and Mathematical Systems, Springer-Verlag, 1986.

37. "A Distribution System Policy Simulator." (Revised) (with P. Jackson and R. Rushmeier) School of Operations Research and Industrial Engineering Technical Report No. 629, Cornell University, Ithaca, NY, 1988.
38. "Comment on 'Aggregate Safety Stock Levels and Component Part Commonality.'" (with W. Maxwell, J. McClain, L. Thomas, E. Weiss) Management Science, Vol. 30, No. 6, June 1984, pp. 772-773.
39. "Multi-Item, One-Warehouse, Multi-Retailer Distribution Systems." (with R. Roundy) Management Science, Vol. 33, No. 12, December 1987, pp. 1613-1621.
40. "COSMOS: Cornell Simulator of Manufacturing Operations." (with P. Jackson, W. Martin, S. Bellantoni and R. Ferstenberg) School of Operations Research and Industrial Engineering Technical Report No. 684, Cornell University, Ithaca, NY, 1986.
41. "Scheduling in Repetitive Manufacturing Environments." (with W. Maxwell, P. Jackson and R. Roundy) School of Operations Research and Industrial Engineering Technical Report No. 692, Cornell University, Ithaca, NY, 1986.
42. "The COSMOS Scheduler." (with P. Jackson and C. Jones) School of Operations Research and Industrial Engineering Technical Report No. 735, Cornell University, Ithaca, NY, 1987.
43. "COSMOS: The Cornell Simulator of Manufacturing Operations." (with P. Jackson and C. Jones) School of Operations Research and Industrial Engineering Technical Report No. 752, Cornell University, Ithaca, NY, 1987.
44. "Establishing Reorder Intervals and Inspection Policies When Production and Inspection Processes are Unreliable." School of Operations Research and Industrial Engineering Technical Report No. 774, Cornell University, Ithaca, NY, 1988.
45. "Determining Optimal Reorder Intervals in Capacitated Production-Distribution Systems." (with P. Jackson and W.L. Maxwell), Management Science, Vol. 34, No. 8, August 1988, pp. 938-958.)
46. The Manufacturing System Development Game. (with P. Jackson and J. Jenner) International Business Machines Corporation, Engineering and Manufacturing Technical Education Center, Thornwood, N.Y., 1988.
47. "Risk Pooling in a Two Period, Two Echelon Inventory Stocking and Allocation Problem." (with P. Jackson) Naval Research Logistics Quarterly Vol. 36, No. 1, February 1989, pp. 1-26.
48. "An Application of a Hierarchical Modeling Framework to the Computer Maintenance Industry." (with P. McCrink and L. DeNardis) School of Operations Research and Industrial Engineering, Technical Report No. 855, Cornell University, Ithaca, NY, 1989.
49. "COSMOS: A Framework for a Computer-Aided Logistics System." (with P. Jackson and C. Jones) Journal of Manufacturing and Operations Management Vol. 2, 1989, pp. 222-248.

50. "Stochastic Analysis of Cyclic Schedules: Algorithms and Examples." (with R. Bowman) School of Operations Research and Industrial Engineering, Technical Report No. 945, Cornell University, Ithaca, NY, 1990.
51. "The Velocity Manufacturing Company." (with D. Severance) School of Operations Research and Industrial Engineering, Technical Report No. 996, Cornell University, Ithaca, NY, 1992.
52. "The NOVA Manufacturing Company." (with D. Severance) School of Operations Research and Industrial Engineering, Technical Report No. 1043, Cornell University, Ithaca, NY, 1992.
53. "Exact Analysis of the No B/C Stock Policy." (with S.A. Carr, A.R. Gullu and P.L. Jackson) School of Operations Research and Industrial Engineering, Technical Report No. 1051, Cornell University, Ithaca, NY, 1993.
54. "Analysis of Multistage Production Systems." (with R. Roundy) in Graves, S., A.H.G. Rinnooy Kan, and P.H. Zipkin (Eds.), Logistics of Production and Inventory, Handbooks in Operations Research and Management Science, Vol. 4, North Holland, 1993.
55. "Stochastic Analysis of Cyclic Schedules." (with R. Bowman) Operations Research, Vol. 41, No. 5 (1993) 947-958.
56. "A Curriculum and Course Materials for Manufacturing System Design." (with P. Jackson and J. Jenner) 1993 ASEE Annual Conference Proceedings.
57. "Nova Incorporated: A-Case The Rebirth of an International Corporation." (with D. Severance) School of Operations Research and Industrial Engineering, Technical Report No. 1074, Cornell University, Ithaca, NY, 1993.
58. "Nova Incorporated: B-Case Operational Analysis of the New Logistics Systems." (with D. Severance) School of Operations Research and Industrial Engineering, Technical Report No. 1075, Cornell University, Ithaca, NY, 1993.
59. "Nova Incorporated: D-Case The Experiment" (with D. Severance) School of Operations Research and Industrial Engineering, Technical Report No. 1076, Cornell University, Ithaca, NY, 1993.
60. "An Approach to Production Planning and Scheduling in Cyclically Scheduled Manufacturing Systems." (with A.G. Loerch) International Journal of Production Research Vol. 32, No. 4, 1994, pp. 851-871.
61. "Instructor's Notes for Llenroc Plastics: Market Driven Integration of Manufacturing and Distribution Systems." (with P. Jackson) School of Operations Research and Industrial Engineering, Technical Report No. 1081, Cornell University, Ithaca, NY, 1994.
62. "Nova Incorporated: Case C Results of a Worldwide Market Research Study." (with D. Severance) School of Operations Research and Industrial Engineering, Technical Report No. 1084, Cornell University, Ithaca, NY, 1994.

63. "Nova Inc.: Case E - Two Opportunities." (with D. Severance) School of Operations Research and Industrial Engineering, Technical Report No. 1100, Cornell University, Ithaca, NY, 1994.
64. "Analyzing Multifacility Inventory Systems." (with J. Pereira and R. Roundy) School of Operations Research and Industrial Engineering, Technical Report No. 1107, Cornell University, Ithaca, NY, 1994.
65. "Optimization-Based Scheduling for the Stochastic Lot Scheduling Problem." (with C. Sox) School of Operations Research and Industrial Engineering, Technical Report No. 1113, Cornell University, Ithaca, NY, 1994 (submitted to IIE Transactions).
66. "On the Computation of Queue Length Probabilities in a Two-Priority Class M/G/1 Queue." (with R. Gullu and P. Jackson) School of Operations Research and Industrial Engineering, Technical Report No. 1138, Cornell University, Ithaca, NY, 1995.
67. "Llenroc Plastics Europe." (with P. Jackson, Ch. Delporte, and P. Semal) School of Operations Research and Industrial Engineering, Technical Report No. 1141A, Cornell University, Ithaca, NY, 1995.
68. "Llenroc Plastics Europe: Teaching Notes." (with P. Jackson, Ch. Delporte, and P. Semal) School of Operations Research and Industrial Engineering, Technical Report No. 1141C, Cornell University, Ithaca, NY, 1995.
69. "A Comparison of Alternative Kanban Control Mechanisms: Part I. Background and Structural Results." (with S. Tayur) IIE Transactions 27 (1995) 140-150.
70. "A Comparison of Alternative Kanban Control Mechanisms: Part II. Experimental Results." (with S. Tayur) IIE Transactions 27 (1995) 151-161.
71. "Production Control of Cyclic Schedules with Demand and Process Variability." (with R.A. Bowman) Production and Operations Management 4, 2 (1995) 145-162.
72. "A Hierarchical Approach for Metal Parts Fabrication." (with E. Iakovou and K. Malik) International Journal of Production Research 33, 5 (1995) 1257-1274.
73. "Experiential Learning in Manufacturing System Design." (with P. Jackson) Technology Management 1, 5 (1995) 196-199.
74. "The Economics of Sharing Inventories." School of Operations Research and Industrial Engineering, Technical Report No. 1175, Cornell University, Ithaca, NY, 1996.
75. "Multi-item, Multi-period Production Planning with Uncertain Demand." (with C. Sox) IIE Transactions 28 (1996) 891-900.
76. "A Paradigm Lost." School of Operations Research and Industrial Engineering, Technical Report No. 1180, Cornell University, Ithaca, NY, 1997.
77. "The Velocity Manufacturing Company - Two Years Later." (with D. Murray and D. Severance) School of Operations Research and Industrial Engineering, Technical Report No. 1192, Cornell University, Ithaca, NY, 1997.

78. "Velocity Inc.: Case B Results of the Market Research Study." (with D. Severance) School of Operations Research and Industrial Engineering, Technical Report No. 1195, Cornell University, Ithaca, NY, 1997.
79. "Llenroc Plastics: Teaching Notes." (with P. Jackson and K. Bourland) School of Operations Research and Industrial Engineering, Technical Report No. 1198, Cornell University, Ithaca, NY, 1997.
80. "Llenroc Plastics: A Case Study in Manufacturing and Distribution Systems Integration." (with P.L. Jackson) School of Operations Research and Industrial Engineering, Technical Report No. 1211, Cornell University, Ithaca, NY, 1998.
81. "A Review of the Stochastic Lot Scheduling Problem." (with C.R. Sox, P.L. Jackson, and A. Bowman) International Journal of Production Economics 62, 3 (1999) 181-200.
82. "Determining and Allocating Capacity-Driven Safety Stock in Multi-Item, Multi-Echelon Systems." (with E. Chan and J. Rappold) School of Operations Research and Industrial Engineering, Technical Report No. 1231, Cornell University, Ithaca, NY, 1999.
83. "Analytic Methods for Estimating Labor Requirements at a Parts Distribution Center." (with E. Chan) School of Operations Research and Industrial Engineering, Technical Report No. 1232, Cornell University, Ithaca, NY, 1999.
84. "Velocity Manufacturing Company Supplier Partnership Proposal." (with D. Severance) School of Operations Research and Industrial Engineering, Technical Report No. 1239, Cornell University, Ithaca, NY, 1999.
85. "Llenroc Electronics." (with D. Severance) School of Operations Research and Industrial Engineering, Technical Report No. 1240, Cornell University, Ithaca, NY, 1999.
86. "The Effects of Load Smoothing on Inventory Levels in a Capacitated Production and Inventory System." (with E.Chan) School of Operations Research and Industrial Engineering, Technical Report No. 1251, Cornell University, Ithaca, NY, 1999.
 - a. "Maintenance Support for the Reusable Launch Vehicle Program: Determining and Evaluating Spare Stock Levels for Recoverable Parts." (with K. Caggiano) School of Operations Research and Industrial Engineering, Technical Report No. 1269, Cornell University, Ithaca, NY, 2000.
87. "Maintenance Support for the Reusable Launch Vehicle Program: the RLV Repair Cycle Simulator." (with P.L. Jackson, K.E. Caggiano, and D.J. Oenning) School of Operations Research and Industrial Engineering, Technical Report No. 1270, Cornell University, Ithaca, NY, 2000.
88. "Analysis of Ordering Patterns in Serial Supply Chains." School of Operations Research and Industrial Engineering, Technical Report No. 1277, Cornell University, Ithaca, NY, 2000.
89. "Heuristic Computation of Periodic-Review Base Stock Inventory Policies." (with R. Roundy) Management Science 46 (2000), 104-109.

90. "A Computationally Efficient Approach for Determining Inventory Levels in a Capacitated Multi-Echelon Production-Distribution System." (with J.A. Rappold) Naval Research Logistics 47 (2000), 377-398.
91. "Some Analytic Results for a Periodic Review Lost Sales Problem." (with G. Janakiraman) School of Operations Research and Industrial Engineering, Technical Report No. 1283, Cornell University, Ithaca, NY, 2001. (Submitted to Operations Research.)
92. "A Combinatorial Multi-Indenture, Multi-Item Inventory Model for NASA's Reusable Launch Vehicle Program." (with K. Caggiano) School of Operations Research and Industrial Engineering, Technical Report No. 1284, Cornell University, Ithaca, NY, 2001. (Submitted to Operations Research.)
93. "NOVA Incorporated: F-case Two Years Later." (with D. Murray, J. Rappold, and D. Severance) School of Operations Research and Industrial Engineering, Technical Report No. 1285, Cornell University, Ithaca, NY, 2001.
94. "Guidelines for Collaborative Supply Chain System Design and Operation." (with D. Murray, J. Rappold, and D. Collins) Information Systems Frontiers 3 (2001), 427-453.
 - a. "Base Stock Levels in Capacitated Multi-Item, Multi-Echelon Systems with Stochastic, Non-Stationary, Cyclic Demand." (with D.H. Murray and J.A. Rappold) School of Operations Research and Industrial Engineering, Technical Report No. 1305, Cornell University, Ithaca, NY, 2001.
95. "Capacitated Production Planning and Inventory Control When Demand is Unpredictable for Most Items: The No B/C Strategy." (with D.H. Murray and J.A. Rappold) School of Operations Research and Industrial Engineering, Technical Report No. 1306, Cornell University, Ithaca, NY, 2001.
96. "A Multi-Echelon, Multi-Item Inventory Model for Service Parts Management with Generalized Service Level Constraints." (with K.E. Caggiano, P.L. Jackson and J.A. Rappold) School of Operations Research and Industrial Engineering, Technical Report No. 1307, Cornell University, Ithaca, NY, 2001.
97. "A Model for Inventory Allocation and Repair in a Two-Echelon Network with Emergency Shipments." (with K.E. Caggiano) School of Operations Research and Industrial Engineering, Technical Report No. 1308, Cornell University, Ithaca, NY, 2001.
98. "A Simple Algorithm for Part Stocking to Satisfy Pooled Customer Service Requirements at Minimum Cost." (with K.E. Caggiano, P.L. Jackson and J.A. Rappold) School of Operations Research and Industrial Engineering, Technical Report No. 1309, Cornell University, Ithaca, NY, 2001.
99. "Optimal Stocking in Repairable Parts Networks with Repair Capacity and Inventory Pooling." (with K.E. Caggiano, P.L. Jackson and J.A. Rappold) School of Operations Research and Industrial Engineering, Technical Report No. 1310, Cornell University, Ithaca, NY, 2001.