Sauder School of Business
THE UNIVERSITY OF BRITISH COLUMBIA
Vancouver, B.C. V6T 1Z2

CURRICULUM VITAE

MARTIN L. PUTERMAN   Home Address:

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Date: May 20, 2019

I.   EDUCATION

1962 - 1966	Cornell University, A.B. (Mathematics)
1966 - 1967	Purdue University, Computer Sciences Department
1967 - 1971	Stanford University, M.S. (Statistics),
	Ph.D. (Operations Research), Ph.D. Dissertation, "On the Optimal Control of Diffusion Processes," supervised by Arthur F. Veinott, Jr.

II.   PROFESSIONAL EMPLOYMENT RECORD

a)   Teaching or Research Positions Held Prior to UBC Appointment

1973/10 - 1974/06:	Consultant, Massachusetts Public Interest Research Group.
1971/09 - 1973/08:	Visiting Assistant Professor and Assistant Professor, University of Massachusetts.
1970/09 - 1971/05:	Volunteer Mathematics Teacher, Lothlorien High School.
1967/09 - 1969/04:	Operations Analyst, Stanford Research Institute.
1967/06 - 1967/09:	Mathematician, Aerospace Corporation

b)   Date of First UBC Appointment: July 1, 1974

c)   Rank of First Appointment: Visiting Assistant Professor

d)   Subsequent Ranks and Dates of Promotion:
Assistant Professor, July 1, 1975
Associate Professor, July 1, 1979
Professor, July 1, 1986
Advisory Council Professor of Management, 1991-2000
Associate Dean, Research and Communications, 1999 - 2000
Advisory Board Professor of Operations, 2000 - 2014
Half Time Appointment July 1, 2011
Professor Emeritus, July 1, 2014

e) **Date of Granting of Appointment without Term:** July 1, 1980

f) **University & Faculty Teaching and Service Responsibilities:**

Teaching: Commerce 110, 111, 210, 211, 212, 291, 311, 312, 314, 315, 411, 515, 518, 580, 581, 582, 584, 585, 586, 589, 612; BABS 502, 504;BATL 510, BAMS 501,502, 514,517,518,580A; BAHC 510, 580A Mathematics 318, 405; Statistics 405, EMBA 512

g) **Service**

Sauder School of Business:

Course Coordinator: Commerce 210 (1974-1978), 111(1979), 311(1980,1986,1988), 211(1981-1983), 212(1982), 312(1989), 291(1998)

Member: Curriculum Committee; Undergraduate Quantitative Methods Review Committee; Ad Hoc Committee on Undergraduate Program; Ph.D. Committee; Dean's Advisory Committee on Research; Appointment, Promotion and Tenure Committee, Dean Search Committee, Health Dean's Advisory Committee

Chair: Appointment, Promotion and Tenure Committee. (1988-1990) Management Science Division, July- Dec, 1992. Dean's Performance Advisory Committee, 1996-1998,2003-2006

Coordinator: IAMS Student Seminar, Statistics Workshop

University: Senior Appointments Committee (1987-1988, 1990-1992) University Industry Liaision Committee (1996-2004) Research Awareness Committee (1997)

h) **Leaves of Absence**

July 1, 1980 - June 30, 1981: Survey Statistician, Energy Information Administration, U.S. Department of Energy, Washington, D.C.

July 1, 1986 - June 30, 1987: Research Division, Children's Hospital and University of California, Santa Barbara, Dept. of Applied Probability and Statistics

Jan. 1, 1993 - Dec. 30, 1993: Newcastle University, Australia, Statistics Department (Jan -July), UBC (July- Dec).

Sept.1,2001- Aug. 31, 2002 Centre for Operations Excellence – UBC Commerce

Jan1, 2007- Dec 31, 2007 Vancouver, BC

i) **Associate Member** Department of Pediatrics, Faculty of Medicine, U.B.C. Department of Statistics, Faculty of Science, U.B.C.

III. **PROFESSIONAL ACTIVITIES**

a) **Memberships in Professional Societies**

INFORMS
Canadian Operations Research Society

b) **Professional Service Outside Sauder School of Business**

Principal Investigator and Academic Lead on the CIHR Team for Operations Research in Quality Cancer Care – 2007-present

Associate Editor: Operations Research (1980-1986)
       Management Science (1977-1981)
       Stochastic Models (1986-1989)
       Mathematics of Operations Research (1995- 2003)
       Production and Operations Management (2009-2011)
       Manufacturing and Service Operations Management (2010-2011)

NSERC Grant Selection Committee - Industrial Engineering (1991- 1992, 1993-1995)

Associate Book Review Editor: Journal of American Statistical Association (1977-1979)

Referee: Annals of Statistics, Biometrika, Canadian Journal of Statistics, Communication in Statistics, IEEE Transactions on Automatic Control, Journal of Finance, Journal of Optimization Theory and Its Applications, Management Science, Mathematics of Operations Research, National Research Council(U.S.), Natural Science and Engineering Research Council, Operations Research, Operations Research Letters, Psychological Bulletin, SIAM Journal on Linear Algebra and Its Applications, SIAM Journal on Control, Stochastic Processes and Their Applications, Zeitschrift fur Operations Research, Technometrics, Annals of Operations Research, Stochastic Models, Biometrics, Advances in Applied Probability, Psychometrika, etc….

Director and Founder: British Columbia Children's Hospital Biostatistical Consulting Service (1985 - 1990).

Founder: Statistical Consulting and Research Laboratory, Newcastle University (1993).

Organizer: International Conference of Dynamic Programming, University of British Columbia, April 1977.

Publicity Director and Run Organizer: CORS/TIMS/ORSA 1989.

Chairman: Workshop on Clinical Trials, Vancouver, BC, 1990

Member: Vaccine Evaluation Centre Advisory Committee 1988-1990

Member: Health Services & Policy Research Support Network Steering Council - 2004

President: Biostatistics Section of Statistical Society of Canada (1990-1991)

Committee Member:
 Statistical Society of Canada - Bylaws Committee (1990-1993)
 Canadian Journal of Statistics Editor Search Committee 1991

Prize Committee Memberships
 COPSS Snedecor Award Committee (Best Publication in Biostatistics Award) - 1993-1995 (Chair

1995)
Canadian Journal of Statistics Award Committee - 1995-1997 (Chair 1997)
INFORMS Applied Probability Prize Committee 1997-2000 (Chair 1999)
Canadian Operations Research Society Practice Prize Committee 2001
MSOM Student Paper Award Committee -2001
CORS Award of Merit – 2006-2007

Chairman; CORS 2003 – Vancouver

Invited Lectures (1990-present):
    SIAM Conference on Stochastic Control, Minneapolis - Sept 1992
    Queensland University - Statistics Department - May 1993
    Queensland University of Technology - Statistics Department - May 1993
    University of New South Wales - Statistics Department - June 1993
    NSF Symposium on Reinforcement Learning - Harper's Ferry, W.Va. April 1996
    Conference on Computational Economics - Geneva, June 1996
    Dutch Operations Research Society Symposium - Leiden, June 1997
    Swiss Doctoral Colloquium – Zinal Switzerland – March 1999
    University of Michigan – April 2000
    University of Toronto – October 2001
    University of Chicago – May 2003
    Northwestern University – May 2003
    University of Calgary – October 2004
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    UBC-Okanagan – Sept 2009
    Zuse Institure – Berlin – October 2009
    McGill – April 2010
    Washington Univ. – May 2010
    Stanford – October 2010
    Univ. of Michigan – April 2011
    Univ. of Chicago – April 2011
    NYU – October 2011
    Columbia – October 2011
    Georgia Tech – April 2012
    CREATE Summer School – McGill – May 2013
    Lund University – September 2013
    Amsterdam Free University – September 2013
    Hong Kong City University – January 2014
    University of Toronto – April 2014
    University of Chicago – May 2014
    SIAM conference on Optimization – May 2014
    ORAHS 2015- University of Montreal – Plenary Speaker – July 2015
    Numerous INFORMS and CORS Conference

Stanford University Clinical Evaluation Research Center – guest faculty, (2011-present)

c)   **Research Centres**

Director and Founder: Bureau for Research on Applications of Management Science and Statistics-1995-1998

Director and Founder: Centre for Operations Excellence, 1998-2005

Director and Founder: UBC Centre for Health Care Management 2005-2006
Research Director: UBC Centre for Health Care Management 2006-2011

d)   **Academic or Professional Awards**

Most Prestigious

Lanchester Prize, INFORMS, 1995. (Best Publication Award)
CORS Award of Merit – 2005
Informs Fellow – 2006

Others

Leverhulme Fellowship Award, The University, Sheffield, United Kingdom, January 1974.
Commonwealth Visiting Professorship, University of Manchester, July 1978.
UBC Commerce Outstanding Research Award -2000
UBC Commerce Talking Stick Award for Innovative Course Development -2001
PIMS Industry Outreach Award – 2001
CORS Practice Prize – 2002, 2005
INFORMS Case Competition – 2003 – First Prize
Pierskalla Prize – Best Health Care Operations Research Paper – INFORMS 2009
Laurent Picard Lecturer – McGill - 2010

f)   **Consultancies**

Angus Reid Group, BC Assessment Board, Workers Compensation Board of BC, Canadian Tire Pacific Associates, Edwards, Kenny and Bray, Powertech Inc., Logic Installations, Ferrence and Weicker, BC Hydro, Fanny's Fabrics, Michael Smith Foundation, Teekay Shipping, Providence Health Care in addition to numerous COE Partners and clients

IV.   RESEARCH AND SCHOLARLY ACTIVITIES

a)   **Areas of Special Interest and Accomplishment**

1. Health Care Operations Research
2. Markov decision processes - Theory, Computational Methods and Applications.
3. Statistical Modeling and Forecasting

b)   RESEARCH GRANTS

MITACS - National Center for Excellence (Project Leader)

Applied Probabilistic Models

1999-2000	$150,000
2000-2001	$130,000
2001-2002	$150,000
2002-2003	$110,000
2003-2004	$125,000

Health Care Operations Research

2006-2007	$ 50,000
2008-2009	$57,500

Natural Science and Engineering Research Council

Operating Grant - Computational Methods in Dynamic Programming and Statistics

1983-1986	55,065
1986-1988	63,000
1988-1991	88,500
1991-1995	96,000
1995-2000	155,000

Discovery Grant - Adaptive Decision Making in Random Environments: Inventory, Revenue and Supply Chain Management

2001-2007	252,000
2007-2012	252,000

Discovery Grant- Health Care Dynamic Programming

2012-2017	170,000

Equipment Grants

1994 (with D.Atkins)	30,547
1996	12,016
2001	65,000

Industrially Oriented Research Grant - Optimal work flow control for cycle time reduction in a manufacturing system

1997 (with H. Chen)	$40,500

CIHR – Operations Research in Quality Cancer Care (co- PI)

2007-2012	$1,490,000

KT Grant – Implementing Chemotherapy Scheduling Software

2011-2012	$100,000

COE – Industrial Partnership Funding

Approximately $500,000 per year 1998- present.

British Columbia Children's Hospital, - Research Division - Biostatistical Consulting Service

1985	15,000
1986	32,000
1987	36,000
1988	53,000

Vancouver Foundation - Use of Digitized Echocardiography to predict anthracycline cardiomyopathy in paediatric cancer patients (co-investigator)

1985-1989	50,632

Workshop on Design and Management of Clinical Trials - Children's Miracle Network Telethon

        1989   15,000

Worker's Compensation Board of BC - Claims Forecasting

        1995   76,740

BRAMSS (BC ASI and Corporate Contacts)

        1996-1997 $35000

HSS Large Grant – "Enhancing Stock Sustainability by Efficient Use of Fish Processing Facilities" with MA Begen

        2003-2005 $9000

c)   **THESES SUPERVISED**

Ph.D.

Moon Chirl Shin, Computational Methods in Dynamic Programming
Bernard Lamond, The Generalized Inverse in Average Reward Markov Decision Processes
Brian Leroux, Maximum Likelihood Estimation for Mixture Distributions and Hidden Markov Models,
 (The Pierre Robiallard Award (1989) for most outstanding Canadian Ph.D Dissertation in Statistics)
Peiming Wang, Mixed Regression Models for Discrete Data
Keith Freeland, Statistical Analysis of Discrete Time Series
Xiaomei Ding, Demand Estimation and Optimal Policies for Lost Sales Inventory Models,
 (Best Student Paper ,INFORMS Section on Manufacturing and Service Operations Management - 1998)
Jonathan Patrick, Optimal Patient Scheduling
Fredrik Odegaard, Optimal Product Release in Internet Auctions
Mariel Lavieri, Prostate Cancer Treatment and Health Care Workforce Planning
 (Pierskalla Prize – INFORMS Health Applications Section – 2009, 2nd Place INFORMS Dantzig Dissertation Prize,
 2010)
Antoine Saure – Healthcare Scheuling Scheduling
Greg Werker – Strategic Resource Planning in Healthcare under Uncertainty: British Columbia Cancer Agency and
Vancouver's Downtown Eastside

Master's.

Daymond Ling, A Diffusion Process Model for a Two Product Inventory System.
Jackie Hsu, Ridge Regression with Autocorrelated Errors.
Barbara Gosling, Selection of The Biasing Parameter in Ridge Regression
Peter Schumacher, Monitoring Cardiotoxic Effects of Chemotherapy
Murray Mackinnon, Collinearity in Generalized Linear Models
Iqbal Jamal, Controlling a Reservoir System in British Columbia
Brian Kapalka, Inventory Control in the Retail Sector: A Case Study of Canadian Tire Pacific Associates
 (The Canadian Association of Logistics Management outstanding student paper award, 1995).
Cheryl Garden, Modeling Zero Inflated Count Data (Statistics Department)
Shoujun Luo, Statistical Inference for Seizure Data (Statistics Department)
Rafael Sanegre, Scheduling Customer Service Representatives for the Workers' Compensation Board of British
Columbia
Alex Rapoport, Optimal Bucking for Decayed Trees
Jason Goto, A Markov Decision Process Model for Airline Meal Provisioning

(1999 CORS Student Paper Prize)
Vincent Morency, A Proposal for Improving the Meal Provisioning Process at Canadian Airlines
Ernest Urbanovich, Identifying High-risk Claims within the Workers' Compensation Board of British Columbia's Claim Inventory by using Logistic Regression Modeling
Anna Maria Kim, Contact Centre Staff Scheduling at Phillips, Hagar and North Investment Management Ltd.
Kyle Biswanger, Markov Decision Process Models for Airline Inflight Inventory Control
Remi Desmeules, Dynamic Bayesian Models with Motion Picture Revenue Forecasting
John Lee, Interactive Multi-Criteria, Multi-User Ranking Models.
Sheelagh Turner, Forecasting Models for Air Cargo Volumes
Bryan Read, Red, Yellow, or Green Light? Signalling Performance in the Workers' Compensation Board of British Columbia's Executive Dashboard
Ernest Wu, Aggregate Logistics Optimization for a Large Beverage Company
Sean Baird, Estimating Mixtures of Exponential Distributions Using Maximum Likelihood and the EM Algorithm to Improve Simulation of Telecommunications Networks
Kelly Chung, Expansion Planning at a Prominent Canadian Investment Management Firm
Iris Guo, Staff Scheduling and Workstation Allocation at UBC Libraries
Mariel Lavieri, Planning and Optimization for a Pulp and Paper Company
Mike Darud, (MHA), Statistical Analysis of Radiation Therapy Planning
Devon Poznanski, (MHA), Radiation Therapy Follow-up Practices

e)   Thesis Committees

Ph.D.   P. Windal, A.L. Ananthanarayann, D. Lane, H.Cheng, Kaan Katiriciogulu, Michael Armstrong, X. Shen, K. Sudhakar (Pathology), B. Rosen-Harris (Psychology, Univ. of Alberta), M. Vanderbosch, S. Chuchun Lin, T. Lauck (Mathematics), X. Song (Statistics), R.Dearden (Comp Sci.), S. Swami, M. Carlson, Robert St. Aubin, Bob Price (Computer Science), Sandra Regan (Nursing)

M.Sc.   R. Pieter (Mathematics), E. Matsumura, N. Portman, R. Friedman, W. Wong (Computer Science), C. Pulfer, K. Caskey, S. Betton, plus numerous COE students.

f)   University Examiner

Ph.D.   V. Zeidan (Mathematics), C. Genet (Mathematics), H. Koster (Commerce), N. Fortin (Economics), R. Tribe (Mathematics), N. Zhang (Computer Science)

g)   External Examiner

M. Turner (S.F.U. - Economics)

V.   PUBLIC SERVICE

President	Unit I Daycare Society, 1983 - 1984
Coach	West Point Grey Little League, 1986 - 1994
Coach	Queen Mary School, Senior Boys Basketball 1995
Chairperson	Trimble After School Care Society, 1987-1990
Chairperson	Temple Shalom Religious School Committee, 1991-1992
Board Member	Jewish Family Services Agency, 1996 - 1999
Board Member	Louis Brier Home for the Aged 2007-present
Member	Advisory Committee on Utility Pricing to Mayor Kevin White, Boston, Massachusetts, May 1974.

Name: MARTIN L. PUTERMAN   Division: Operations and Logistics

Faculty: Sauder School of Business   Date: May 20, 2019

BOOKS

Puterman, M.L., (Ed.) *Dynamic Programming and Its Applications*, Academic Press, 1978. (Proceedings of The International Conference on Dynamic Programming, Vancouver, 1978)

* Puterman, M. L., *Markov Decision Processes: Discrete Stochastic Dynamic Programming*, John Wiley and Sons, New York, NY, 1994, 649 pages. (Winner 1995 INFORMS Lanchester Prize for best operations research publication; paperback version released, March 2005.)

JOURNAL ARTICLES

1. Puterman, M.L., "Sensitive Discount Optimality in Controlled One-Dimensional Diffusions," *Annals of Probability,* 2,3:408-419 (1974).

2. Puterman, M.L., "A Diffusion Process Model for a Storage System*," Logistics, Volume 1, North Holland/TIMS Studies in the Management Sciences* (M.A. Geisler, Ed.) 1:143-159 (1975). (Invited paper)

3. Puterman, M.L., "Optimal Control of Diffusion Processes with Reflection, "*Journal of Optimization Theory and Its Applications*, 22, 1:103-115, 1977.

4. Puterman, M.L. and M.C. Shin, "Modified Policy Iteration Algorithms for Discounted Markov Decision Problems," *Management Science*, 24, 11:1127-1137, 1978.

5. Everitt,R., M.L. Puterman, N. Sonntag, and P. Whalen, "A Mathematical Programming Model for the Management of a Renewable Resource System: The Kemano II Development Project," *Journal of Fisheries Research Board of Canada,* 35, 2:235-246, 1978.

6. Puterman, M.L. and S.L. Brumelle, "On the Convergence of Policy Iteration in Stationary Dynamic Programming," *Mathematics of Operations Research*, 4,1:60-69, 1979.

7. Puterman, M.L., "On the Convergence of Policy Iteration for Controlled Diffusions," *Journal of Optimization Theory and Its Applications*, 33, 1:137-144, 1981.

8. Puterman, M.L. and M.C. Shin, "Action Elimination Procedures for Modified Policy Iteration Algorithms*," Operations Research*, 30, 2:301-318, 1982.

9. van Nunen, J.A.E.E., and M.L. Puterman, "On Computing Optimal Policies for G/M/s Queueing Systems*," Management Science*, 29, 6: 725-734, 1983.

10. Speert, D.P., Eftekhar, F. and M.L. Puterman, "Non-Opsonic Phagocytosis of Pseudomonas Aeruginosa Strains from Cystic Fibrosis Patients," *Infection and Immunity*, 43, 3; 1006-1011, 1984.

11. Schweitzer, P.J., M.L. Puterman, and K.W. Kindle, "Iterative Aggregation - Disaggregation Procedures for Solving Discounted Semi-Markovian Reward Processes," *Operations Research*, 35, 3, 589-605, 1985.

12. Gosling, B.J. and M.L. Puterman, "Ridge Estimation in Regression Problems with Autocorrelated Errors: A

Monte Carlo Study," *Communications in Statistics*, 14, 3, 577-614, 1985.

13. Kastrukoff, L.F., A.S. Lau, and M.L. Puterman, "Genetics of Natural Resistance to Herpes Simplex Virus 1: Latent Infection of the Peripheral Nervous System in Mice," *The Journal of General Virology*, 67, 613-631, 1986.

14. Sandor, G., M.L. Puterman, M.W. Patterson, M.A. Tipple and D.J. Vince, "The Effect of Pressure Loading, Volume Loading and Cardiomyopathy on Left Ventricular Diastolic Operant Chamber Stiffness and Myocardial Stiffness in Congenital Heart Disease, With Re-evaluation of Normal Paediatric Values*," Journal of the American College of Cardiology*, 8, 2, 371-378, 1986.

15. Junker, A., E.A. Clark, H.D. Ochs, M.L. Puterman and R.J. Wedgewood, "Abnormal Antibody Responses to Bacteriophage ØX174 in Patients with Acute Epstein-Barr Virus Infection*" Journal of Immunology and Immunopathology*, 40, 436-446, 1986.

16. Hancock, E.J., K. Pot, M.L. Puterman and A.J. Tingle, "Dissociation Between Rubella HAI Titers and Whole Virus ELISA Values in Congenital Rubella Syndrome", *The Journal of Infectious Diseases*, 154, 1031-1033, 1986.

17. Petty, R.E., D.W.C. Hunt, D.F. Rollins, M.L. Schroeder and M.L. Puterman, "Immunity to Soluble Retinal Antigen in Patients with Uveitis Accompanying Juvenile Rheumatoid Arthritis," *Arthritis and Rheumatism*, 30, 287-29, 1987.

18. Hordijk, A. and M.L. Puterman, "On the Convergence of Policy Iteration in Finite State Average Reward Markov Decision Processes: The Unichain Case," *Mathematics of Operations Research*, 12, 163-176, 1987.

19. Sandor, G., P. Schumacher, M.L. Puterman and R. Popov, "Normal Serial Variability for M-Mode and Digitized Echocardiography in a Paediatric Population," *Paediatric Cardiology*, 8, 23-26, 1987.

20. Puterman, M.L. and L.C. Thomas "A Note on Computing Optimal Policies for G/M/s Queueing Systems'*,"* *Management Science*, 33, 939-943, 1987.

21. Lokitch, G., V. Singh, M.L. Puterman, W.J. Godolphin, S. Sheps, A.J. Tingle, F.Wong and G. Quigley, "Age-Related Changes in Humoral and Cell-Mediated Immunity in Down Syndrome Children Living at Home', *Pediatric Research*, 22, 536-540, 1987.

22. van Dijk, N. and M.L. Puterman, "Perturbation Theory for Markov Reward Processes with Applications to Queueing Systems*," Advances in Applied Probability*, 20, 79-98, 1988.

23. Puterman, M.L., "Leverage and Influence in Autocorrelated Regression Models," *Applied Statistics*, 37, 76-88, 1988.

24. Puterman, M.L., N. Hrboticky and S. Innis, "Nonlinear Estimation of Parameters in Biphasic Arrhenius Plots," *Analytical Biochemistry*, 170, 409-420, 1988.

25. Thomas, E.E., M.L. Puterman, E. Kawano and M. Curran, "Evaluation of Immunoassays for the Detection of Rotavirus in Stool Samples from a Pediatric Population," *Journal of Clinical Microbiology*, 26, 1189-1193, 1988.

26. Magil, A.B., M.L. Puterman, M.S. Ballow, V. Chan, D.S. Lirenman, A. Rae and R.A.L. Sutton, "Prognostic Factors in Diffuse Proliferative Lupus Glomerulonehritus," *Kidney International*, 34, 511-517, 1988.

27. Lamond, B. and M.L. Puterman, "Generalized Inverses in Discrete Time Markov Decision Processes*" SIAM Journal of Matrix Analysis and Applications*, 10, 118-134, 1989.

28. Lokitch, G., M.L. Puterman, W.J. Godolphin, S. Sheps, A.J. Tingle, and G. Quigley, "Infection and Immunity in Down Syndrome: A Trial of Long Term Low Dose Oral Zinc," *Journal of Pediatrics*, 114, 781-787, 1989.

29. Gribble, M.J., M.L. Puterman and N.M. McCallum, "Pyuria: Its Relationship to Bacteria in Spinal Cord Injured Patients on Intermittent Catheterization" *Archives of Physical Medicine and Rehabilitation*, 70, 376-379, 1989.

30. Chanson, S., M.L. Puterman and W. Wong, "A Markov Decision Process Model for Computer System Load Control", *INFOR*, 27, 387-402, 1989.

31. Mackinnon, M.J. and M.L. Puterman, "Collinearity in Generalized Linear Models," *Communications in Statistics*, 18(9), 3463-3472, 1989.

32. Hrboticky, N., MacKinnon, M.J., Puterman, M.L. and Innis, S.M. "Effect of a linoleic acid rich vegetable oil "infant" formula on brain synaptosomal lipid accretion and enzyme thermotropic behavior in the newborn piglet*". J. Lipid Research*, 30, 1173-1184, 1989.

33. Tingle, A.J., K.H. Pot, F.P. Yong, M.L. Puterman and E.J. Hancock. "Kinetics of Isotype-Specific Humoral Immunity in Rubella Vaccine-Associated Arthropathy". *Clinical Immunology and Immunopathology*, 53, S99-S106, 1989.

34. Rotschild, A., A. Solimano, M.L. Puterman, J. Smith, A. Sharma, and S. Albersheim, "Large Magnitude Compliance Increase in Response to   -2 Agonist in Premature Infants Developing Bronchopulmonary Dysplasia*," Journal of Pediatrics*, 115, 984-991, 1989.

35. Rotschild, A., E. Ling, M.L. Puterman and D. Farquharson, "Neonatal Outcome of Prolonged Rupture of Membranes," *American Journal of Obstetrics and Gynaecology*, 162, 46-52, 1989.

36. Puterman, M.L., P. Schumacher and G.S.S. Sandor, "Optimal Choice of Prognostic Variables with an Application to Cardiac Monitoring Using M-Mode Echocardiography," *Statistics in Medicine*, 9, 273-286, 1990.

37. Haviv, M. and Puterman, M.L. "An Improved Algorithm for Solving Communicating Average Reward Markov Decision Processes" *Annals of Operations Research*, (special issue on Markov Decision Processes) 28, 229-242, 1991.

38. Rotschild, A., Chitiyat, D., Puterman, M.L., Phang, M.S., Ling, E., Baldwin, V., "Optimal Positioning of Endotracheal Tubes For Ventilation of Preterm Infants", *American Journal of Diseases of Children*, 145, 1007-1012, 1991.

39. Sandor, G.S., Puterman, M.L., P.Rogers, K.W. Chan, S. Pritchard, R. Popov, "Early Prediction of Anthracycline Cardionyapthy using Standard M-Mode and Digitized Echocardiography*", American Journal of Pediatric Hematology/ Oncology*, 14, 151-157, 1992.

40. Leroux, B.G. and Puterman, M.L., "Maximum Penalized Likelihood Estimation for Independent and Markov-Dependent Poisson Mixtures", *Biometrics,* 48, 545-558, 1992.

41. Le, N.D., Leroux, B.L. and Puterman, M.L., "Exact Likelihood Evaluation in a Markov Mixture Model for

Time Series of Seizure Counts" *Biometrics*, 48, 317-322, 1992.

42. Haviv, M. and Puterman, M.L., "Estimating the Value of a Discounted Reward Process", *Operations Research Letters*, 11 267-272, 1992.

43. Massoud, E.A., Sekhon, H.S., Rotschild, A., Puterman, M.L., Matsui, R. and Thurlbeck, W.M., "In Vitro Branching Morphogenesis of the Fetal Rat Lung", *Pediatric Pulmonology* 15, 89-97, 1993.

44. Gribble, M.J. and Puterman, M.L., "Prophylaxis of Urinary Tract Infection in Persons with Recent Spinal Cord Injury: A Prospective, Randomized, Double-Blind, Placebo-Controlled Study of Trimethoprim-Sulfamethoxazole", *American Journal of Medicine*, 95, 151- 162, 1993.

45. Speert, D.P., Puterman, M.L. et. al. "A Multicenter Comparison of Methods for Typing Strains of Pseudomona Aeruginosa predominantly from Patients with Cystic Fibrosis", *Journal of Infectious Diseases*, 169, 134-142, 1994.

46. Leroux, B. and Puterman, M.L. "Reponse to: Empirical Fitting of Discrete Distributions" , *Biometrics*, 50, 578-579, 1994.

47. Wang, P., Puterman, M.L., Le, N. and Cockburn, I. "Mixed Poisson Regression Models with Covariate Dependent Rates", *Biometrics*, 52, 381-400, 1996.

48. Rotschild, A., Massoud, E.A., Puterman, M.L., Sekhon, H.S. and Thurlbeck, W.M., "Development of the Pulmonary Airways in the Fetal Rat and its Relationship to Prenatal Environment", *Pediatric Pulmonogy*, 21, 219-226, 1996.

49. Cherukupalli, K., Larson, J.E., Puterman, M.L. "Comparative Biochemistry of Gestational and Postnatal Lung Growth and Development in the Rat and Human", *Pediatric Pulmonology,* 24, 12-21, 1997.

50. Dear K., Dobson, A. and Puterman, ML, "Estimated Correlations from Epidemiological Data in the Presence of Measurement Error", *Statistics in Medicine*, 16, 2177-2189, 1997.

51. Wang, P., Cockburn, I. and Puterman, M.L.,. "Analysis of Patent Data - A Mixed Poisson Regression Model Approach", *Journal of Business and Economic Statistics*, 16, 27-41, 1998.

52. Haviv, M. and Puterman, M.L. "Bias Optimality in Controlled Queueing Systems", *Journal of Applied Probability,* 35, 136-150, 1998.

53. Volk, T., Hahn, L., Hayden, R. Abel, J., Puterman, M.L. and Tyers, G.F. Reliability Audit of a Regional Cardiac Registry, *Journal of Thoracic and Cardiovascular Surgery*, 903-910, 1998.

54. Wang, P. and Puterman, ML "Mixed Logistic Regression Models", *Journal of Agricultural, Biological and Environmental Statistics*, 3, 175-200, 1998.

55. Wang, P. and Puterman, M.L., "Markov Poisson Regression Models for Discrete Time Series; Parts I and II", *Journal of Applied Statistics,* 26, 855-869, 871-882, 1999.

56. Kapalka, B, Katiriciogulu, K. and Puterman M.L. " Inventory Control in a Retail Environment with Lost Sales and Service Level Constraints"*, Production and Operations Management*, 8, 393-408, 2000.

57. Lewis, M. and Puterman, M.L., " A Note on Bias Optimality in Controlled Queueing Systems", *Journal of*

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