### Priscilla E. Greenwood

# Curriculum Vitae, January 27 2024

Department of Mathematics
The University of British Columbia
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## **Post-secondary education**

Duke University, Durham, N.C., B.A., 1955-1959 University of Wisconsin Madison, M.A., 1961 Ph.D., 1963

## **Academic appointments**

University of Wisconsin, Assistant Professor, 1963-1964 North Carolina College, Durham, Associate Professor, 1964-1966 University of British Columbia, Assistant Professor, 1967-1975 Associate Professor, 1975-1982 Professor, 1985-2000 Professor Emerita, 2000-present

# Visiting and Research Professorships post-retirement

Arizona State University, Visiting Professor, 2000-2003
Senior Researcher (12 mo.), 2003-2004
(Ctr. for Evolutionary Functional Genomics)
Research Professor, 2004-2009
Stockholm University, Visiting Professor (3 mo.), 2002
SAMSI, Visiting Professor (12 mo.), 2009-10
(Statistical and Applied Mathematical Institute, Research Triangle Park, NC)
University of Copenhagen, Visiting Professor (4 mo.), 2010

# Student and postdoctoral fellow training

#### Ph.D. Students

Soo Hong Chew, PhD 1980, Two representation theorems and their application to decision theory, University of British Columbia, co-supervised with Kenneth R. MacCrimmon. Now National University of Singapore, Department of Economics.

Anuj Mubayi, PhD 2008, The role of environmental context in the dynamics and control of alcohol use, Arizona State University, co-supervised with Carlos Castillo-Chávez. Now Arizona State University, School of Human Evolution and Social Change and Simon A. Levin Mathematical Computational Modeling Science Center.

Carlos Alan Torre, PhD 2009, Deterministic and stochastic metapopulation models for Dengue fever, Arizona State University, co-supervised with Carlos Castillo-Chávez.

Daniel Rios-Doria, PhD 2010, Modeling Transient and Sustained Epidemic Dynamics: Cholera, Influenza and Rubella as Case Studies, Arizona State University, co-supervised with Gerardo Chowell.

David Tello, PhD 2012, A mathematical model of Dopamine neurotransmission, Arizona State University, co-supervised with Sharon Marie Crook. Now Grand Canyon University, College of Arts and Science.

May Anne Estrera Mata, PhD 2017, Avian influenza epidemic recurrence and approximate stochastic models, University of British Columbia Okanagan, co-supervised with Rebecca C. Tyson. Now University of the Philippines Mindanao, Department of Mathematics, Physics and Computer Science.

### M.Sc. Students

Glen Cooper, 1975 Brian Leroux, 1986 David Szabo, 1987 Kongning Liu, 1989 Harold Ship, 1993 Anthony Billups, 2005 Azra Panjwani, 2007 Kamal Barley, 2008

# **Undergraduate Students**

Conor Morrison, 2020 James Hu (jointly supervised with Wayne Nagata), 2021

# Postdoctoral fellows (since 1998)

Ursula Müller, January-August 1998 John M. Andries, September 1998-July 1999 Greg Lewis, September 1999-July 2000 Luis Gordillo, 2004-2008

# Preprints/Research in progress

Submitted: (also on bioRxiv)
Attentional selection and communication through coherence: Scope and limitations. PE

Greenwood, LM Ward - bioRxiv, 2023

P Rowat, PE Greenwood. An ISI study of a Stochastic Morris-Lecar burster. (To be submitted)

- P.E. Greenwood and L.M. Ward. Building stochastic dynamical neural circuits for cortical control. (To be submitted). https://www.carmin.tv/en/video/building-stochastic-dynamical-neural-circuits-for-cortical-control
- P.E. Greenwood and L.M. Ward, Dynamical connections between Quasi-cycles and noisy limit cycles in neural and other systems. (In progress)
- L.F. Gordillo and P.E. Greenwood, Small environmental noise and the Allee ghost. (In progress)
- L.F. Gordillo and P.E. Greenwood, Allee clustering in an individual based model. (In progress)

## **Publications**

### Journals.

- 1. L.F. Gordillo and P.E. Greenwood. Epidemic highs and lows: a stochastic diffusion model for active cases. Journal of Biological Dynamics 17(1) (2023). doi: 10.1080/17513758.2023.2189001
- 2. L.F. Gordillo and P.E. Greenwood. Intermittent precipitation-dependent interactions, encompassing Allee Effect, may yield vegetation patterns in a transitional parameter range. Bulletin of Mathematical Biology 85(10) (2023). doi: 10.1007/s11538-023-01191-y
- 3. J.E. Rubin, D.J.D. Earn, P.E. Greenwood, T.L. Parsons and K.L. Abbott. Irregular population cycles driven by environmental stochasticity and saddle crawlbys. Oikos (2023). doi: org/10.1111/oik.09290
- 4. N.S. Witte and P.E. Greenwood. On the density arising from the domain of attraction of an operator interpolating between sum and supremum: The α-Sun operator. Journal of Mathematical Analysis and Applications 527(1, Part 2) (2023), 127371.
- 5. L.F. Gordillo and P.E. Greenwood. Allee effects plus noise induce population dynamics resembling binary Markov highs and lows. Bulletin of Mathematical Biology 84(6) (2022), 60 doi: 10.1007/s11538-022-01017-3
- 6. P.E. Greenwood and L.M. Ward. Phase offset determines alpha modulation of gamma phase coherence and hence signal transmission, Biosystems 219 (2022). (selected papers from 14th International Coding Workshop, Seattle WA, 2021)
- 7. C.L. Morrison, P.E. Greenwood and L.M. Ward. Plastic systemic inhibition controls amplitude while allowing phase pattern in a stochastic neural field model. Physical Review E 103 (2021).
- 8. P.H. Baxendale, P.E. Greenwood and L.M. Ward. Noise sharing and Mexican hat coupling in a stochastic neural field. Physical Review E 100 (2019).

- 9. M.A. Mata, P.E. Greenwood and R Tyson. The relative contribution of direct and environmental transmission routes in stochastic avian flu recurrence: an approximate analysis. Bulletin of Mathematical Biology 81 (2019), 4484-4517.
- 10. M.A. Mata, R.C. Tyson and P.E. Greenwood. Random fluctuations around a stable limit cycle in a stochastic system with parametric forcing. Journal of Mathematical Biology 79 (2019), 2133-2155.
- 11. S. Dixon, N. Huntly, P.E. Greenwood and L.F. Gordillo. A stochastic model for water-vegetation systems and the effect of decreasing precipitation in semi-arid regions. Mathematical Biosciences and Engineering 15(5) (2018), 1155-1164.
- 12. F. Barraquand, S. Louca, K.C. Abbott, C.A. Cobbold, F. Cordoleani, D.L. DeAngelis, B.D. Elderd, J.W. Fox, P. Greenwood, F.M. Hilker, D.L. Murray, C.R. Stieha, R.A. Taylor, K. Vitense, G.S.K. Wolkowicz and R.C. Tyson. Moving forward in circles: challenges and opportunities in modelling population cycles. Ecology Letters 20 (2017), 1074-1092.
- 13. W. Lee, P.E. Greenwood, N. Heckman and W. Wefelmeyer. Pre-averaged kernel estimators for the drift function of a diffusion process in the presence of microstructure noise. Statistical Inference for Stochastic Processes 20 (2017), 237-252.
- 14. L.M. Ward and P.E. Greenwood. Stochastic facilitation in the brain? Journal of Statistical Mechanics: Theory and Experiment (2016), 054033. doi: 10.1088/1742-5468/2016/05/054033
- 15. R.V. Chamberlin, S. Abe, B.F. Davis, P.E. Greenwood and A.S.H. Shevchuk. Fluctuation theorems and 1/f noise from a simple matrix. The European Physical Journal B 89 (2016), 185.
- 16. P.E. Greenwood, M.D. McDonnell and L.M. Ward. A Kuramoto coupling of quasicycle oscillators with application to neural networks. Journal of Coupled Systems and Multiscale Dynamics 4 (2016), 1-13.
- 17. P. E. Greenwood, M. D. McDonnell and L.M. Ward. Dynamics of gamma bursts in local field potentials. Neural Computation 27 (2015) 74-103.
- 18. P.F. Rowat and P.E. Greenwood. The ISI distribution of the Hodgkin-Huxley neuron. Frontiers in Computational Neuroscience 8 (2014), 111.
- 19. R. Bani, R. Hameed, S. Szymanowski, P.E. Greenwood, C. Kribs-Zaleta and A. Mubayi. Influence of environmental factors on college alcohol drinking patterns. Mathematical Biosciences and Engineering 10 (2013), 1281-1300.
- 20. A. Mubayi and P.E. Greenwood. Contextual interventions for controlling alcohol drinking. Mathematical Population Studies 20 (2013), 27-53.

- 21. S. Ditlevsen and P.E Greenwood. The Morris-LeCar neuron embeds a leaky integrate-and-fire model. Journal of Mathematical Biology 67 (2013), 239-259.
- 22. P.F. Rowat and P.E. Greenwood. Identification and continuity of the distributions of burst-length and inter-spike interval in the stochastic Morris-Lecar neuron. Neural Computation 23 (2011), 3044-3124.
- 23. M.T. Giraudo, P.E. Greenwood and L. Sacerdote. How sample paths of leaky integrate-and-fire models are influenced by the presence of a firing threshold. Neural Computation 23 (2011), 1743-1767.
- 24. P.H. Baxendale and P.E. Greenwood. Sustained oscillations for density-dependent Markov processes. Journal of Mathematical Biology 63 (2011), 433-457.
- 25. A. Mubayi, P.E. Greenwood, X. Wang, C. Castillo-Chávez, D.M. Gorman, P. Gruenewald and R.F. Saltz. Types of drinkers and drinking settings, an application of a mathematical model. Addiction 106 (2011), 749-758.
- 26. P.E. Greenwood, A. Schick and W. Wefelmeyer. Estimating the inter-arrival time density of semi-Markov processes under structural assumptions on the transition distribution. Statistics and Probability Letters 81 (2011), 277-282.
- 27. A. Mubayi, P.E. Greenwood, C. Castillo-Chávez, P.E. Gruenewald, D. Gorman. Impact of relative residence times on the distribution of heavy drinkers in highly distinct environments. Socio-Economics Planning Sciences 44 (2010), 45-66.
- 28. E.J. Allen, L.J.S. Allen, A. Arconiega and P.E. Greenwood. Construction of equivalent stochastic differential equation models. Stochastic Analysis and Applications 26 (2008), 274-297.
- 29. L.F. Gordillo, S.A. Marion and P.E. Greenwood. The effect of patterns of infectiousness on epidemic size. Mathematical Biosciences and Engineering 5 (2008), 429-435.
- 30. L.F. Gordillo, S.A. Marion, A. Martin-Löf and P.E. Greenwood. Bimodal epidemic size distributions for near-critical SIR with vaccination. Bulletin of Mathematical Biology 70 (2008), 589-602.
- 31. S. Erland and P.E. Greenwood. Constructing  $1/\omega^{\alpha}$  noise from reversible Markov chains. Physical Review E 76 (2007), 031114-1-031114-13.
- 32. L.M. Ward and P.E. Greenwood. 1/f noise. Scholarpedia 2(12):1537 (2007).
- 33. P. Lánský and P.E. Greenwood. Optimal signal in sensory neurons under an extended rate coding concept. BioSystems 89 (2007), 10-15.

- 34. P.E. Greenwood and P. Lánský. Information content in threshold data with non-Gaussian noise. Fluctuation and Noise Letters 7 (2007), L79-L89.
- 35. R. Kuske, L.F. Gordillo and P.E. Greenwood. Sustained oscillations via coherence resonance in SIR. Journal of Theoretical Biology 245 (2007), 459-469.
- 36. P. Lánský and P.E. Greenwood. Optimal signal estimation in neuronal models. Neural Computation 17 (2005), 2240-2257.
- 37. P.E. Greenwood, U.U Müller and L.M. Ward. Soft threshold stochastic resonance. Physical Review E 70 (2004), 051110.
- 38. P.E. Greenwood and P. Lánský. Optimum signal in a simple neuronal model with signal dependent noise. Biological Cybernetics 92 (2005), 199-205.
- 39. P.E. Greenwood, U.U Müller and W. Wefelmeyer. Efficient estimation for semiparametric semi-Markov processes. Communications in Statistics -Theory and Methods 33 (2004), 419-435.
- 40. P.E. Greenwood, U.U. Müller, L.M. Ward and W. Wefelmeyer. Statistical analysis of stochastic resonance in a threshold detector. Austrian Journal of Statistics 32 (2003), 49-70.
- 41. P.E. Greenwood, D.T. Haydon, N.C. Stenseth and T. Saitoh. Spatio-temporal dynamics of the grey-sided vole in Hokkaido: identifying coupling using state-based Markov-chain modelling. The Royal Society Proceedings B (Biological Sciences) 270 (2003), 435-445.
- 42. P.E. Greenwood, A. Schick and W. Wefelmeyer. Comment on: Inference for semiparametric models: some questions and an answer, by P.J. Bickel and J. Kwon. Statistica Sinica 11 (2001), 892-906.
- 43. P.E. Greenwood, D.T. Haydon, N.C. Stenseth, and M.S. Boyce. Phase coupling and synchrony in the spatiotemporal dynamics of muskrat and mink populations across Canada. Proceedings of the National Academy of Sciences U.S.A. 98 (2001), 13149-13154.
- 44. P.E. Greenwood, L.M. Ward, D.F. Russell, A. Neiman and F. Moss. Stochastic resonance enhances the electrosensory information available to paddlefish for prey capture. Physical Review Letters 84 (2000), 4773-4776.
- 45. P.E. Greenwood and W. Wefelmeyer. Characterizing efficient estimators for local interaction Gibbs fields. Statistical Inference for Stochastic Processes 2 (1999), 119-134.
- 46. P.E. Greenwood, I.W. McKeague and W. Wefelmeyer. Von Mises type statistics for single site updated local interaction random fields. Statistica Sinica 9 (1999), 699-712.

- 47. P.E. Greenwood and I.A. Ibragimov. Bahadur's asymptotic efficiency and the LAN expansion I. Lower bound, independent observations. Mathematical Methods of Statistics 8 (1999), 181-208.
- 48. P.E. Greenwood and W. Wefelmeyer. Reversible Markov chains and optimality of symmetrized estimators. Bernoulli 5 (1999), 109-123.
- 49. P.E. Greenwood, L.M. Ward and W. Wefelmeyer. Statistical analysis of stochastic resonance in a simple setting. Physical Review E 60, 4 (1999), 4687-4695.
- 50. P.E. Greenwood and W. Wefelmeyer. Characterizing efficient estimators for local interaction Gibbs fields. Statistical Inference for Stochastic Processes 2 (1999), 119-134.
- 51. P.E. Greenwood, I.W. McKeague and W. Wefelmeyer. Von Mises type statistics for single site updated local interaction random fields. Statistica Sinica 9 (1999), 699-712.
- 52. P.E. Greenwood and W. Wefelmeyer. Reversible Markov chains and optimality of symmetrized empirical estimators. Bernoulli 5 (1999), 109-123.
- 53. P.E. Greenwood, I.W. McKeague and W. Wefelmeyer. Information bounds for Gibbs samplers. Annals of Statistics 26 (1998), 2128-2156.
- 54. P.E. Greenwood and J. Sun. On criticality for competing influences of boundary and external field in the Ising model. Journal of Statistical Physics 92 (1998), 35-45.
- 55. P.E. Greenwood and W. Wefelmeyer. Cox's factoring of regression model likelihoods for continuous time processes. Bernoulli 4 (1998), 65-80.
- 56. P.E. Greenwood and W. Wefelmeyer. Maximum likelihood estimator and Kullback-Leibler information in misspecified Markov chain models. Theory of Probability and its Applications 42 (1998), 103-111.
- 57. G. Hooghiemstra and P.E. Greenwood. The domain of attraction of the alpha-sun operator for type II and type III distributions. Bernoulli 3 (1997), 479-489.
- 58. P.E. Greenwood and J. Sun. Equivalences of the large deviation principle for Gibbs measures and critical balance in the Ising model. Journal of Statistical Physics 86 (1997), 149-164.
- 59. P.E. Greenwood and W. Wefelmeyer. Empirical estimators for semi-Markov processes. Mathematical Methods of Statistics 5 (1996), 229-315.
- 60. P.E. Greenwood, I.W. McKeague and W. Wefelmeyer. Outperforming the Gibbs sampler empirical estimator for nearest neighbor random fields. Annals of Statistics 24 (1996), 1433-1456.

- 61. P.E. Greenwood and W. Wefelmeyer. Efficiency of empirical estimators for Markov chains. Annals of Statistics 23 (1995), 132-143.
- 62. P.E. Greenwood and W. Wefelmeyer. Optimality properties of empirical estimators for multivariate point processes. Journal of Multivariate Analysis 49 (1994), 202-217.
- 63. P.E. Greenwood and W. Wefelmeyer. Nonparametric estimators for Markov step processes. Stochastic Processes and Their Applications 52 (1994), 1-16.
- 64. P.E. Greenwood and W. Wefelmeyer. Asymptotic minimax results for stochastic process families with critical points. Stochastic Processes and Their Applications 44 (1993), 107-116.
- 65. R.A. Doney and P.E. Greenwood. On the joint distribution of ladder variables of random walk. Probability Theory and Related Fields 94 (1993), 457-472.
- 66. A. Barbour and P.E. Greenwood. Rates of Poisson approximation to finite range random fields. Annals of Applied Probability 3 (1993), 91-102.
- 67. P.E. Greenwood and I.A. Ibragimov. On asymptotically efficient estimation in the sense of Bahadur. Doklady Akademii Nauk 332 (1993), 5-7; translation in Russian Academy of Sciences Doklady Mathematics 48 (1993), 221-224.
- 68. P.E. Greenwood and I.V. Evstigneev. Markov evolving random field and splitting random elements. Teoriya Veroyatnostei i ee Primeneniya 37 (1992), 46-48; translation in Theory of Probability and its Applications 37 (1992), 40-42.
- 69. P.E. Greenwood and A.N. Shiryaev. Asymptotic minimaxity of a sequential maximum likelihood estimator for a first order autoregressive model. Stochastics and Stochastic Reports 38 (1992), 49-65.
- 70. P.E. Greenwood and W. Wefelmeyer. Partially specified filtered models and efficiency. Teoriya Veroyatnostei i ee Primeneniya 37 (1992) 162-165; translation in Theory of Probability and its Applications 37 (1992) 139-142.
- 71. P.E. Greenwood and W. Wefelmeyer. Efficient estimation in a nonlinear counting process regression model. Canadian Journal of Statistics 19 (1991), 165-178.
- 72. P.E. Greenwood and G. Hooghiemstra. On the domain of attraction of an operator between supremum and sum. Probability Theory and Related Fields 89 (1991), 201-210.
- 73. P.E. Greenwood and W. Wefelmeyer. Efficiency of estimators for partially specified filtered models. Stochastic Processes and Their Applications 36 (1990), 353-370.
- 74. P.E. Greenwood and G. Hooghiemstra. An extreme-type limit law for a storage process. Mathematics of Operations Research 13 (1988), 232-242.

- 75. P.E. Greenwood and M.S. Nikulin. Some remarks with respect to the application of tests of chi-square type. Zap. Nauchn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 158 (1987), 49-71; translation in Journal of Soviet Mathematics 43 (1987), 2776-2791.
- 76. P.E. Greenwood and A.A. Novikov. One-sided boundary crossing for processes with independent increments. Theory of Probability and its Applications 31 (1986), 266-277.
- 77. C.M. Goldie and P.E. Greenwood. Variance of set-indexed sums of mixing random variables and weak convergence of set-indexed processes. Annals of Probability 14 (1986), 817-839.
- 78. C.M. Goldie and P.E. Greenwood. Characterizations of set-indexed Brownian motion and associated conditions for finite-dimensional convergence. Annals of Probability 14 (1986), 802-816.
- 79. P.E. Greenwood and E. Perkins. Limit theorems for excursions from a moving boundary. Theory of Probability and its Applications 29 (1984), 703-714.
- 80. P.E. Greenwood and E. Perkins. A conditioned limit theorem for random walk and Brownian local time on square root boundaries. Annals of Probability 11 (1983), 227-261.
- 81. P.E. Greenwood, E. Omey and J.L. Teugels. Harmonic renewal measures and bivariate domains of attraction in fluctuation theory. Z. Wahrsch. Verw. Gebiete 61 (1982), 527-539.
- 82. P.E. Greenwood, E. Omey and J.L. Teugels. Harmonic renewal measures. Z. Wahrsch. Verw. Gebiete 59 (1982), 391-409.
- 83. E. Arjas and P.E. Greenwood. Competing risks and independent minima, a marked point process approach. Advances in Applied Probability 13 (1981), 669-680.
- 84. P.E. Greenwood and J. Pitman. Fluctuation identities for random walk by path decomposition at the maximum. Advances in Applied Probability 12 (1980), 291-293.
- 85. P.E. Greenwood and J. Pitman. Construction of local time and Poisson point processes from nested arrays. Journal of the London Mathematical Society (2) 22 (1980), 182-192.
- 86. P.E. Greenwood and J. Pitman. Fluctuation identities for Lévy processes and splitting at the maximum. Advances in Applied Probability 12 (1980), 893-902.
- 87. S. Resnick and P.E. Greenwood. A bivariate stable characterization and domains of attraction. Journal of Multivariate Analysis 9 (1979), 206-221.
- 88. P.E. Greenwood and Moshe Shaked. Dual pairs of stopping times for random walk. Annals of Probability 6 (1978), 644-650.
- 89. P.E. Greenwood and Moshe Shaked. Fluctuations of random walk in Rd and storage systems. Advances in Applied Probability 9 (1977), 566-587.

- 90. P.E. Greenwood and I. Monroe. Random stopping preserves regular variation of process distributions. Annals of Probability 5 (1977), 42-51.
- 91. P.E. Greenwood. Wiener-Hopf decomposition of random walks and Levy processes. Z. Wahrsch. Verw. Gebiete 34 (1976), 193-198.
- 92. P.E. Greenwood. Wiener-Hopf methods, decompositions, and factorisation identities for maxima and minima of homogeneous random processes. Advances in Applied Probability 7 (1975), 767-785.
- 93. P.E. Greenwood. Extreme time of processes with stationary independent increments. Annals of Probability 3 (1975), 664-676.
- 94. P.E. Greenwood. The Martintote. Annals of Probability 2 (1974), 84-89.
- 95. P.E. Greenwood. On Prabhu's factorization of Levy generators. Z. Wahrsch. Verw. Gebiete 27 (1973), 75-77.
- 96. P.E. Greenwood. Asymptotics of randomly stopped sequences with independent increments. Annals of Probability 1 (1973), 317-321.
- 97. P.E. Greenwood and B. Fristedt. Variations of processes with stationary independent increments. Z. Wahrsch. Verw. Gebiete 23 (1972), 171-186.
- 98. P.E. Greenwood. The variation of a stable path is stable. Z. Wahrsch. Verw. Gebiete 14 (1969), 140-148.
- 99. P.E. Greenwood. An asymptotic estimate of Brownian path variation. Proceedings of the American Mathematical Society 21 (1969), 134-138.
- 100. P.E. Greenwood. A convolution equation on a compact interval. Proceedings of the American Mathematical Society 16 (1965), 8-13.

## **Conference Proceedings**

- 1. P.E. Greenwood and L.M. Ward. Rapidly forming, slowly evolving spatial patterns from quasi-cycle Mexican hat coupling. Neural Coding 2018, Eds. S. Ditlevsen, L. Kostal, L. Sacerdote and M. Tamborrino. Mathematical Biosciences and Engineering. 16 (2019), 6769-6793.
- 2. P.E. Greenwood. A stochastic dynamics viewpoint of some neuron models. Intelligent Sensors, Sensor Networks and Information Processing (JSSNIP), 7th International Conference (2011), 155-157.

- 3. L. Gordillo, P.E. Greenwood and R. Kuske. Autonomous stochastic resonance produces epidemic oscillations of fluctuating size. Prague Stochastics, Eds. M. Hušková and M. Janžura, Mathfyzpress (2006), 102-111.
- 4. P.E. Greenwood and D.T. Haydon. Semiparametric inference for synchronization of population cycles. Selected Proceedings of the Symposium on Inference for Stochastic Processes (Athens, GA, 2000), 205-211. IMS Lecture Notes Monograph Series, 37, Institute of Mathematical Statistics, Beachwood, OH, 2001.
- 5. P.E. Greenwood and E.V. Evstigneev. Stochastic extrema, splitting random elements, and models of crack formation. System Modelling and Optimization (Compiègne, 1993), Lecture Notes in Control and Information Sciences 197 (1994), 315-319. Springer.
- 6. P.E. Greenwood and W. Wefelmeyer. Partial likelihood and estimating equations. Selected Proceedings of the Symposium on Estimating Functions, Eds. I.V. Basawa, V.P. Godambe and R.L. Taylor, IMS Lecture Notes Monograph Series 32 (1997), 19-33.
- 7. P.E. Greenwood and W. Wefelmeyer. Efficient estimating equations for nonparametric filtered models. Statistical Inference in Stochastic Processes, Ed. N. U. Prabhu, Dekker (1990), 107-141.
- 8. P.E. Greenwood and M. Ossiander. Functional convergence of evolving random fields. Selected Proceedings of Sheffield Symposium on Applied Probability (Sheffield, 1989), IMS Lecture Notes Series 18 (1991), 66-99.
- 9. P.E. Greenwood and A.N. Shiryaev. Uniform weak convergence of semimartingales with applications to the estimation of a parameter in an autoregression model of the first order. Statistics and Control of Random Processes (Preila, 1987), "Nauka" (1989), 40-48.
- 10. P.E. Greenwood. Partially specified semimartingale experiments. Statistical inference from stochastic processes (Ithaca, NY, 1987), Contemporary Mathematics 80 (1988), 1-17.
- 11. C.M. Goldie and P.E. Greenwood. Central limit results for random fields. Proceedings of the 1st World Congress of the Bernoulli Society 1 (Tashkent, 1986), VNU Science Press (1987), 345-352.
- 12. P.E. Greenwood. Point processes and system lifetimes. Stochastic Differential Systems (Visegrád, 1980), Lecture Notes in Control and Information Science 36, Springer (1981), 56-60.
- 13. P.E. Greenwood and R. Hersh. Stochastic differentials and non-standard random variables. Probabilistic Methods in Differential Equations (Victoria, B.C., 1974), Lecture Notes in Mathematics 451, Springer (1975), 35-62.

#### **Books**

# (a) Authored

- 1. P.E. Greenwood and L.M. Ward. Stochastic Neuron Models. Mathematical Biosciences Institute Lecture Series. Stochastics in Biological Systems 1.5. Springer (2016), x+75 pages.
- 2. P.E. Greenwood and M.S. Nikulin. A Guide to Chi-squared Testing. Wiley Series in Probability and Statistics: Applied Probability and Statistics (1996), xiv+280 pages.
- 3. I.V. Evstigneev and P.E. Greenwood. Markov Fields Over Countable Partially Ordered Sets, Extrema and Splitting. Memoirs of the American Mathematical Society. 112(537) (1994), vi+100 pages.
- 4. P.E. Greenwood and A.N. Shiryaev. Contiguity and the statistical invariance principle. Stochastics Monographs 1, Gordon & Breach (1985), viii+236 pages.

# (b) Book Chapters

- 1. S. Bhamidi and P.E. Greenwood. Variants of Brownian motion. In: Wiley Encyclopedia of Operations Research and Management Science, Wiley Online Library (2011).
- 2. P.E. Greenwood and L.F. Gordillo. Stochastic epidemic modeling. In: Mathematical and Statistical Estimation Approaches in Epidemiology, Ed. G. Chowell, Springer (2009), 31-52.
- 3. P.E. Greenwood, U.U. Müller and W. Wefelmeyer. An introduction to efficient estimation for semiparametric time series. In: Parametric and Semiparametric Models with Applications to Reliability, Survival Analysis, and Quality of Life, Statistics for Industry and Technology, Ed. M.S. Nikulin, N. Balakrishnan, M. Mesbah and N. Limnios, Statistics for Industry and Technology, Birkhäuser (2004), 253-272.
- 4. P.E. Greenwood and W. Wefelmeyer. Empirical estimators based on MCMC data. In: Handbook of Statistics 21, Ed. D.N. Shanbhag, C.R. Rao, Elsevier (2003), 337-370.
- 5. P.E. Greenwood and W. Wefelmeyer. On optimal estimating functions for partially specified counting process models. In: Optimal Estimating Functions, Ed. V.P. Godambe, Oxford University Press (1991), 147-160.

# **Key Invited Lectures**

Series of Invited Lectures in Europe, 1976-1977: at London School of Economics, London; University of Liverpool (Westfield College); University of Manchester; University of Sheffield; University of Sussex; University of Amsterdam; University of Utrecht; University of Louvain; Helsinki Summer Institute.

Series of Invited Lectures in the U.S.S.R, 1981: delivered in Russian, at Steklov Institute for Mathematics, Russian Academy of Sciences, Moscow and Leningrad; Institute of Mathematics of the National Academy of Sciences of Ukraine, Kiev; Sobolev Institute of Mathematics, Novosibirsk.

1st World Congress of the Bernoulli Society for Mathematical Statistics and Probability (joint with Charles Goldie), Tashkent, Uzbekistan, U.S.S.R., 1986.

Bernoulli Society for Mathematical Statistics and Probability, special meeting on applied probability to honor J. Gani, Sheffield, England, May 1989.

Workshop and Conference in honor of the 70th birthday of Lucien Le Cam, Yale University, New Haven, CT, December 1994.

Joint Statistical Meetings (JSM), annual conference, Chicago, IL, August 1996.

Krieger-Nelson Prize Lecture, Canadian Mathematical Society (CMS), meeting Laval University, Quebec, June 2002.

# **Awards and Distinctions**

Fellow, Institute of Mathematical Statistics (IMS), elected August 1985.

Awarded Inaugural 3-year, interdisciplinary Major Thematic Grant (\$500,000) by the Peter Wall Institute of Advanced Studies, University of British Columbia, for "Crisis Points and Models for Decision," 1997.

Krieger-Nelson Prize of the Canadian Mathematical Society, for Distinguished Research by Women in Mathematics, 2002.

Festschrift Article. Bingham, N.H., Eustigneev, I.V., Priscilla Greenwood: Queen of Probability, Stochastics: An International Journal of Probability and Stochastic Processes 80 (2008), i-vi.

Festschrift Collection. Stochastics: A Festschrift for Priscilla Greenwood, IMS Lecture Notes Monograph Series 57A, special volume, Institute of Mathematical Statistics, Ed. N.H. Bingham, I.V. Eustigneev (2009).

Order of Canada (member), 2020.

## **Organizing Scholarly Meetings - Recent**

American Institute for Mathematics (AIM) Workshop: Deterministic and Stochastic Spatial Models in Population Dynamics, Palo Alto, CA, May 2009.

Statistical and Applied Mathematical Sciences Institute (SAMSI) Workshop, Stochastic Dynamics, Durham, NC, September 2009.

Statistical and Applied Mathematical Sciences Institute (SAMSI) Workshop, Stochastic Dynamics, Durham, NC, March 2010.

Banff International Research Station for Mathematical Innovation and Discovery (BIRS) Focused Research Group Workshop (internationally competitive award), The Mathematical Genesis of the Phenomenon Called 1/f Noise, Banff, Alberta, June 2010.

American Institute for Mathematics (AIM) Workshop: Stochastic Dynamics of Small Networks of NEURONS, Palo Alto, CA, February 2012.

Statistical Society of Canada (SSC), Invited Paper Session, Toronto, Ontario, May 2014.

ICIAM, 8th International Congress on Industrial and Applied Mathematics, Invited Paper Session, Beijing, China, August 2015.

Statistical Society of Canada (SSC), Invited Paper Session, St. Catherines, Ontario, May 2016.

Banff International Research Station for Mathematical Innovation and Discovery (BIRS) Focused Research Group workshop (internationally competitive award), Brain Dynamics and Statistics, Banff, Alberta, February 2017.

Statistical Society of Canada (SSC), Invited Paper Session on Distribution-Free Testing, Montreal, Quebec, June 2018.

International Workshop on Applied Probability (IWAP), Invited Paper Session on Stochastic Neuron and Neural Field Modeling, Budapest, June 2018.

14th International Neural Computation workshop (NC2021), online, co-organizer, July 2021.

Statistical Society of Canada (SSC), Invited Sponsored Paper Session in Probability Section, Stochastic Spatial models for Vegetation, 2023.

Statistical Society of Canada (SSC). Invited Paper Session: Inference for Autoregressive Random Fields, Saint John's, June 2024.

### **Recent Presentations**

Joint presentation with L.M. Ward. Building stochastic dynamical neural circuits for cortical control. Neural Computation 2021. (online)

Joint poster with P. Rowat. An ISI study of a Stochastic Morris-Lecar burster. CNS 2021, Organization for Computational Neuroscience. (online)

Overview on Stochastic Neural Networks, online December, 2022, 1 hour + 1/2 hour questions. Pathways to the 2023 IHP program Random Processes in the Brain. (online)

Inst. H Poincare Paris, in workshop on Stochastic Neural Circuits, March 2023. (in person)