PRISCILLA E. GREENWOOD
Curriculum Vitae

Date: January 2015

POST-SECONDARY EDUCATION

	Degree	
Duke University, Durham, N.C.	B.A.	1955-1959
Massachusetts Institute of Technology		1959-60
University of Wisconsin Madison	M.A.	1961
	Ph.D.	1963

EMPLOYMENT

University of Wisconsin	Assistant Professor	1963-64
North Carolina College, Durham	Associate Professor	1964-66
University of British Columbia	Professor (1985)	1966-2000

Visiting Professor, Arizona State University Dept. of Mathematics and Statistics
August 2000- 2003
Visiting Professor, Stockholm Univ. Sept.-Dec. 2002
Senior researcher, Center for Evolutionary Functional Genomics, ASU
May 2003-May 2004
Research Professor, Arizona State University Dept. of Mathematics and Statistics
Jan. 2004-2009
Visiting Professor, SAMSI, Research Triangle Park N.C. 2009-10
Visiting Professor U. of Copenhagen Aug.-Dec. 2010
UBC (Emeritus Professor) Jan 2011-Present

LEAVES OF ABSENCE from UBC and visiting positions 1970-1997

Where	**Type of Leave**	**Dates**
University of Wisconsin	study leave	1970-71
Honorary Fellow, Mathematics Research Center, U. of Wisconsin		Spring 1971
Stanford University	" "	July-Dec. 1976

Churchill College, Cambridge and	" "	Jan.-July 1977
Statistical Laboratory, Cambridge University England		
University of California, Berkeley	study leave	Aug.-Dec. 1982
University of Sussex, England	" "	Jan.-May 1983
Steklov Math. Inst. Moscow	visiting	July-Dec. 1986
Johns Hopkins University	visiting	Jan.-Dec. 1987
University Delft, Netherlands	visiting	Jan.-June 1988
University of Cologne and	study leave	July-Dec. 1990
University of Heidelberg		
Colorado State University	" "	Jan.-May 1991
University of Heidelberg	" "	May-Aug. 1991
Univ. of Stockholm	visiting	July.-Dec. 1993
Weierstrass Inst. Berlin	study leave	Sept 1996 - Jan.1997
Univ. of Kent, Canterbury, U.K.	study leave	Jan.-May 1997
Univ. of Siegen	study leave	June 1997

Graduate Students and Postdocs Supervised

Student Name	**Program Type**	**Start**	**Year Finish**
Suo Hong Chew	PhD		1980 (co-supervised)
Glen Cooper	MSc		1975
David Szabo	MSc		1987
Brian Leroux	MSc		1986
Kongning Liu	MSc		1989
Harold Ship	MSc		1993
Sveinung Erland	PhD		2004 (co-supervised)
Anthony Billups	MSc		2005
Azra Panjwani	MSc		2007
Kamal Barley	MSc		2008
Anuj Mubayi	PhD		2008
Carlos Alan Torre	PhD		2009
Daniel Rios-Doria	PhD		2010
David Tello	PhD		2012

Post Docs (since 1998):
Ursula Mueller Jan - August 1998

John M. Andries Sept 1998 - July 1999
Greg Lewis Sept 1999 -July 2000
Luis Gordillo 2004-2008

AWARDS

Fellow, Institute of Mathematical Statistics, elected August 1985

Krieger-Nelson Prize for outstanding research record by woman mathematician from Canadian Mathematical Society, 2002.

Award of $500,000 from Peter Wall Inst. of Advanced Studies for their first topic study: "Crisis Points and Models for Decision", 1997-2000.

Festschrift: A Festschrift for Priscilla Greenwood
IMS Lecture Notes-Monograph Series, Ed N. H. Bingham, IV. Eustigneev (2009), and Stochastics 80 (2008) Numbers 2-3.

Organizing (primary organizer of workshop):

AIM Workshop: Deterministic and Stochastic Spatial Models in Population Dynamics, May 2009.

BIRS Focused Research Group workshop (2010), The mathematical genesis of the phenomenon called 1/f noise.

SAMSI Workshops Sept. 2009, March 2010 Stochastic Dynamics.

AIM Workshop: Stochastic Dynamics of Small Networks of Neurons, February 2012.

Publications

PRISCILLA E. GREENWOOD (revised February 2013)

1. REFEREED PUBLICATIONS

(a) Journals

1. A convolution equation on a compact interval, Proc. Amer. Math. Soc. 16(1965), 8-13.
2. An asymptotic estimate of Brownian path variation, Proc. Amer. Math. Soc. 21(1969), 134-138.
3. The variation of a stable path is stable, Z. Wahrsch. Verw. Gebiete 14(1969), 140-148.
4. Variations of processes with stationary independent increments (with Bert Fristedt), Z. Wahrsch. Verw. Gebiete 23(1972), 171-186.
5. Asymptotics of randomly stopped sequences with independent increments, Annals of Probability 1(1973), 317-321.
6. On Prabhu's factorization of Levy generators, Z. Wahrsch. Verw. Gebiete 27(1973), 75-77.
7. The Martintote, Annals of Probability 2(1974), 84-89.
8. Extreme time of processes with stationary independent increments, Annals of Probability 3(1975), 664-676.
9. Wiener-Hopf methods, decompositions, and factorisation identities for maxima and minima of homogeneous random processes, Advances in Applied Probability 7(1975), 767-785.
10. Random stopping preserves regular variation of process distributions (with Itrel Monroe), Annals of Probability 5(l977), 42-5l.
11. Wiener-Hopf decomposition of random walks and Levy processes, Z. Wahrsch. Verw. Gebiete 34(1976), 193-198.
12. Fluctuations of random walk in R^d and storage systems (with Moshe Shaked), Adv. Appl. Prob. 9 (1977), 566-587.
13. Dual pairs of stopping times for random walk (with Moshe Shaked), Annals of Probability 6(1978), 644-650.

14. A bivariate stable characterization and domains of attraction (with Sidney Resnick), Journal of Multivariate Analysis 9 (1979), 206-221.
15. Fluctuation theory for Levy processes and splitting at the maximum (with Jim Pitman), Adv. Appl. Prob. 12 (1980), 893-902.
16. Construction of local time and poisson point processes from nested arrays (with Jim Pitman), J. London Math. Soc. (2) 22(1980), 182-192.
17. Fluctuation identities for random walk by path decomposition at the maximum (with Jim Pitman), Adv. Appl. Prob. 12 (1980), 291-293 (in Conference Proceedings).
18. Competing risks and independent minima, a marked point process approach (with Elja Arjas), Adv. Appl. Prob. 13(1981), 669-680.
19. Harmonic renewal measures (with E. Omey and J.L. Teugels), Z. Wahr. 59(1982), 391-409.
20. Harmonic renewal measures and bivariate domains of attraction in fluctuation theory (with J.L. Teugels and E. Omey). Z. Wahr. 61(1982), 527-539.
21. A conditioned limit theorem for random walk and Brownian local time on square root boundaries, Ann. Prob. 11(1983), 227-261, (with E. Perkins).
22. Limit theorems for excursions from a moving boundary (with E. Perkins), Thy. Prob. and Appl. 29(1984), 703-714.
23. Characterizations of set-indexed Brownian motion and associated conditions for finite-dimensional convergence (with Charles M. Goldie) Ann. Prob. 14(1986), 802-816.
24. Variance of set-indexed sums of mixing random variables and weak convergence of set-indexed processes (with Charles M. Goldie) Ann. Prob. 14(1986), 817-839.
25. One-sided boundary crossing for processes with independent increments (with A.A. Novikov), Thy. Prob. and Appl. 31 (1986), 266-277.
26. An extreme-type limit law for a storage process (with Gerard Hooghiemstra), Mathematics of Operations, Research 13(1988), 232-242.
27. Partially specified semimartingale experiments Contemp. Math. 80 (1988), 1-17.
28. Uniform weak convergence of semimartingales and applications to sequential estimation (with A.N. Shiryaev), Statistics and Control of Stochastic Processes. Nauka, Moscow (1989), 40-48.
29. On the Domain of attraction of an operator between supremum and sum (with G. Hooghremstra) Prob. theory and Related Fields, 89 (1991), 201-210.

30. Asymptotic minimaxity of a sequential maximum likelihood estimator for a first order autoregressive model (with A.N. Shiryaev), Stochastics and Stochastics Reports 38(1992), 49-65.
31. Efficiency of estimators for partially specified filtered models. (with W. Wefelmeyer) Sto. Processes and their Applic. 36 (1990), 353-370.
32. Efficient estimating equations for nonparametric filtered models (with W. Wefelmeyer). Statistical Inference from Stochastic Processes, Vol. 1 (N.U. Prabhu, I.V. Basawa, eds.) (1991), 107-141.
33. Efficient estimation in a nonlinear counting process regression model. (with W. Wefelmeyer) Canadian J. of Statistics 19 (1991), 165-178.
34. Rates of poisson approximation of finite range random fields (with A. Barbour). Annals of Applied Probability 3(1993), 91-102.
35. On the joint distribution of ladder variables of random walk (with R.A. Doney) Prob. Theory and Related Fields 94(1993), 457-472.
36. Asymptotic Minimax Results for stochastic process families with critical points (with W. Wefelmeyer) Sto. Processes and their Applications 44(1993), 107-116.
37. Efficiency of empirical estimators for Markov chains (with W. Wefelmeyer), Annals of Statistics 23 (1995), 132-143.
38. Nonparametric estimators for Markov step processes (with W. Wefelmeyer), Stochastic Processes. Appl. 52 (1994), 1-16.
39. Optimality properties of empirical estimators for multivariate point processes (with W. Wefelmeyer) J. Multiv. Anal. 49 (1994), 202-217.
40. Outperforming the Gibbs sampler empirical estimator for nearest neighbor random fields (with Ian McKeague and W. Wefelmeyer) Annals of Statistics 24(1996), 1433-1456.
41. Empirical estimators for semi-Markov processes (with W. Wefelmeyer) Mathematical Methods of Statistics 5(1996), 229-315.
42. Maximum likelihood estimator and Kullback-Leibler information in misspecified Markov chain models (with W. Wefelmeyer), Teor. Veroyatnost. I Primenen. 42 (1997), 169-178.
43. Equivalences of the large deviation principle for Gibbs measures and critical balance in the Ising model (with Jiaming Sun) J. Statist. Physics 86 (1997), 149-164.

44. The domain of attraction of the alpha-sun operator for type II and type III distributions (with G. Hooghiemstra) Bernoulli 3(1997), 479-489.

45. Cox's factoring of regression model likelihoods for continuous time processes (with W. Wefelmeyer) Bernoulli 4(1998), 65-80.

46. On criticality for competing influences of boundary and external field in the Ising model (with Jiaming Sun) J. Statist. Physics 92(1998), 35-45.

47. Information bounds for Gibbs samplers (with I.W. McKeague and W. Wefelmeyer) Ann. Statist 26(1998), 2128-2156.

48. Reversible Markov chains and optimality of symmetrized empirical estimators. (with W. Wefelmeyer) Bernoulli 5(1999), 109-123.

49. Bahadur's asymptotic efficiency and the LAN expansion (with I. Ibragimov), Mathematical M Methods of Statistics (1999).

50. Von Mises type statistics for single site updated local interaction random fields (with Ian McKeague and W. Wefelmeyer). Statistica Sinica 9(1999), 699-712.

51. Characterizing efficient estimators for local interaction Gibbs fields (with W. Wefelmeyer) Stat. Inf. Sto. Processes 2(1999), 119-134.

52. Statistical analysis of stochastic resonance in a simple setting (with Lawrence Ward and W. Wefelmeyer) Physical Review E 60, 4(1999), 4687-4695.

53. Reversible Markov chains and optimality of symmetrized estimators. (with W. Wefelmeyer) Bernoulli 5(1999), 109-123.

54. Bahadur's asymptotic efficiency and the LAN expansion I. Lower bound, Independent observations. (with I. Ibragimov) Mathematical Methods in Statistics 8 (1999), 181-208.

55. Von Mises type statistics for single site updated local interaction random fields (with Ian McKeague and W. Wefelmeyer). Statistica Sinica 9(1999), 699-712.

56. Characterizing efficient estimators for local interaction Gibbs fields (with W. Wefelmeyer) Stat. Inf. for Sto. Processes 2(1999), 119-134.

57. Statistical analysis of stochastic resonance on a simple setting (with Lawrence Ward and W. Wefelmayer) Physical Review E. 604(1999), 4687-4995.

58. Spatial coupling in cyclic population dynamics:models and data. (with D. Haydon). Theoretical Population Biology 58(2000), 239-254.

59. Stochastic resonance enhances the electrosensory information available to paddlefish for prey capture. (with L. Ward, D.Russell, A.Neiman, F.Moss), Physical review letters 84 (2000), 4773-4776.

60. Phase coupling and snychrony in the spatio-temporal dynamics of muskrat and mink populations across Canada (with D.T.Haydon, N.C.Stenseth, and M.S.Boyce) Proc. Natnl. Acad. Sci. U.S.A., 10.1073 (2001).

61. Commentary on "Inference for Semiparametric Models'" by P.J.Bickel and J.Kwan, (with W.Wefelmeyer and A.Shick) Statistica Sinica 11(2001), 892-906.

62. Spatio-temporal dynamics of the grey-sided vole in Hokkaido: identifying coupling using state-based Markov-chain modeling (with D.T. Haydon, N.C. Stenseth, T.Sato, Proceedings of the Royal Society B, 270(2003), 435-445.

63. Statistical analysis of stochastic resonance in a threshold detector (with U. Mueller, W. Wefelmeyer, L. Ward). Austrian J. of Stat. 32(2003), 49-70.

64. Efficient estimation for semiparametric semi-Markov processes (with U. Mueller and W. Wefelmeyer) Communications in Statistics 33(2004), 419-435.

65. Optimum signal in a simple neuronal model with signal dependent noise (with P.Lansky) Biological Cybernetics 92(2005), 199-205.

66. Soft threshold stochastic resonance (with U. Mueller and L. Ward) Phys Rev. E 70(2004).

67. Optimal signal estimation in neuronal models (with P. Lansky) Neuronal computation 17(2005), 2240-2257.

68. Greenwood P E and Lansky P, Optimal signal in a simple neuronal model with signal dependent noise, Biol. Cybern. 92 (2005), 199-205.

69. Kuske R, Gordillo L F, Greenwood P E, Sustained oscillations via coherence resonance in SIR, Journal of Theoretical Biology 245(2007), 459-469.

70. Greenwood P E, Lansky P, Information content in threshold data with non-Gaussian noise, Fluctuation and Noise Letters 7(2007), L79-89.

71. Lansky P, Greenwood P E, Optimal signal in sensory neurons under an extended rate coding conept, Biosystemss 89(2007), 10-15.

72. 1/f Noise (with Lawrence Ward) Scholarpedia 2(12):1537 (2007).

73. 1/(omega-to-the-alpha) noise from reversible Markov chains on finite state spaces (with Sveinung Erland), Phys Rev. E. 76(2007), 031114.

74. Gordillo L, Martin-Lof A, Marion S, Greenwood P E, Bimodal epidemic size distributions for near-critical SIR with vaccination. Bull. Math. Biol. 70(2008), 589-602.

75. The effect of patterns of infectiousness on epidemic size (with Luis Gordillo, S.A. Marion) Math. Biosciences and Engineering 5(2008), 429-435.

76. Allen E, Allen L J, Arconiega, A, Greenwood, P E, Construction of Equivalent stochastic differential equation models, Stochastic Analysis and Applications 26(2008), 274-297.

77. Mubayi A, Greenwood P E, Castillo-Chavez C, Gorman D., Gruenewald P, Impact of relative residence times on the distribution of heavy drinkers in highly distinct environments, Socio-Economics Planning Sciences, 1(2010), 45-66.

78. Estimating the inter-arrival time density of semi-Markov processes under structural assumptions on the transition distribution (with W. Wefelmeyer and A. Schick) Statist. Prob. Lett 81(2011) 277-282.

79. Types of drinkers and drinking settings, an application of a mathematical model. (with Anuj Mubayi, Xiaohong Wong, Carlos Castillo-Chavez, Dennis Gaman, Paul Gruenewald, Robert Saltz) "Addiction" 106(2011)749-758.

80. Baxendale, P.H. Greenwood, P.E. , Sustained oscillations for density-dependent Markov processes, Journal of Math. Bio. 63(2011), 433-457.

81. Giraudo, M.T., Greenwood, P.E., Sacerdote, L., How sample paths of leaky integrate and fire models are influenced by the presence of a firing threshold. Neural Computation, 23(2011), 1743-1767.

82. Rowat, P.F., Greenwood, P.E., 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.

83. Ditlevsen, S., Greenwood, P., The Morris-LeCar neuron embeds a leaky-integrate-and-fine model, J. Math. Bio. (2012)DO1:10/1007/, 00285-012-0552-7.

84. Mubayi, A, Greenwood, P. Contextual interventions for controlling alcohol drinking, Math. Population Studies 20(2013), 27-53.

85. Bani R., Hameed R, Szymanowskii, S., Greenwood P., Kribs-Zaleta C., Mubayi A., Influence of environmental factors on college alcohol drinking patterns, Math Bioscience & Engineering 10(2013) 1281-1300.

86. Greenwood P.E., McDonnell M.D., Ward L.M., Dynamics of gamma bursts in local field potentials. Neural Computation 27(2015) 74-103.

87. Greenwood P.E., McDonnell M.D., Ward L.M., A Stochastic Kuramoto model of synchronization in a Wilson-Cowan type network. J. Theoret. Biol. (2015) to appear.

88. Rowat P.F., Greenwood P.E., The ISI distribution of the Hodgkin-Huxley neuron. Frontiers in Computational Neuroscience 8(2014), 111.

(b) Conference Proceedings

1. Stochastic differentials and non-standard random variables (with Reuben Hersh). Springer Lecture Notes #451 (1974), Proceedings of Conference on Probabilistic Methods in Differential Equations.
2. Point processes and system lifetimes. Proceedings of 3rd Conference on Stochastic Differential Systems (Hungary, 1980), Springer Lecture Notes.
3. Functional Convergence of Evolving Random Fields (with M. Ossiander). Selected Proceedings of Sheffield Symposium on Applied Probability, IMS Lecture Notes Series 18 (1991) 66-99.
4. Partial likelihood and estimating equations (with W. Wefelmeyer). Selected Proceedings of the Symposium on estimating functions. Eds. I.V. Basawa, V.P. godambe, R.L. Taylor, IMS Lecture Notes Monograph Series Vol 32, (1997) 19-33.
5. Stochastic extrema, splitting random elements, and models of crack formation, (with E.V. Evstigneev) in: J. Henry and J.-P. Ivon eds., System Modelling and Optimization, Proceedings of the 16th IFIP-TC7 Conference, Compreqne, July 5-9 1993, Lecture Notes in Control and Information Sciences, V. 197, Springer, London, (1994) 315-319.
6. Semiparametric Inference for Synchronization of Population Cycles (with D.T. Haydon) in: Selected Proceedings of the Symposium on Inference for Stochastic Processes, Inst of Math Stat. Lecture notes Monograph series 37(2001) 205-211.
7. Gordillo L. Greenwood P E, and Kuske R, Autonomous stochastic resonance produces epidemic oscillations of fluctuating size, Proceedings of Prague Stochastics, 2006, Prague, Mathfyzpress.
8. Greenwood, P.E., A stochastic dynamics viewpoint of some neuron models, Intelligent sensors, sensor networks and Information Processing (JSSNIP) 7th Int. Conf. (2011) p155-157.

2. BOOKS

(a) Authored

1. Contiguity and the Statistical Invariance Principle (with A.N. Shiryayev), monograph, "Stochastics" series, Ed. M.H.A. Davis, Gordon and Breach, London, 1985 (245p).
2. Markov fields over countable partially ordered sets, extrema and splitting (with I.V. Evstigneev) Memoirs of the Amer. Math. Soc. v 112(537), 1994.

3. A Guide to Chi-Squared Testing, joint expository monograph with (M.S. Nikulin), 250 p. Wiley, (1996).

(b) Chapters

1. On optimal estimating functions for partially specified counting process models. (with W. Wefelmeyer) In Optimal Estimating Functions, Oxford U. Press, ed. V.-Godambe (1991) 147-160.
2. Empirical estimators based on MCMC data (with W. Wefelmeyer), in Handbook of Statistics, Ed. D. Shanbhag, 20(2003).
3. An introduction to efficient estimation for semiparametric time series (with U.Mueller, W.Wefelmeyer). Parametric and semiparametric models with applications to reliability, survival analysys and quality of life (M.S. Nikulin, ed.) (2004) 253-272. series: Statistics for Industry and Technology, Birkhauser, Basel.
4. Stochastic Epidemic Modeling (with Luis F. Gordillo) in Mathematical and Statistical Estimation Approaches in Epidemiology. Ed. G. Chowell. Springer (2009).
5. Bhamidi, S., Greenwood, P.E., Variants of Brownian Motion. Wiley Encyclopedia of Operations Research and Management Science (2011).
6. Greenwood, P.E., Ward, L.M., Probability Problems Arising in Models of Stochastic Neural Systems, Ed. R. Durrett, M. Reed, Springer, 2015 (to appear)

3. SUBMITTED

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4. IN PROGRESS

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Greenwood P.E., Rowat Peter, Erchova Irina, One DTO is sufficient for stationarity of subthreshold dynamics in stochastic Morris Lecar and in an entorhynal cortex stellate cell.