

CURRICULUM VITAE : LINDA M. HAINES

NAME Linda Margaret Haines (née Bower)
DATE OF BIRTH 1st August 1944
PLACE OF BIRTH Harrogate, England
MARITAL STATUS Married with two children and four grandchildren

EDUCATIONAL QUALIFICATIONS

University Newnham College, Cambridge.
Degree B.A. (1965). Natural Science Tripos, Part I, Class I; Part II, Class I.
(Double First). M.A. (1969).
Awards College scholar and prizewinner.

University University College London.
Degree M.Phil. (1967). Subject, Inorganic Chemistry.
Title of Thesis, "The Vibrational Spectra of Some Metal Carbonyl
Complexes". Supervisor, Dr. M.H.B. Stiddard.
Awards William Ramsey Medal and Prize.

University University of South Africa
Degree Ph.D. (1970). Subject, Inorganic Chemistry.
Title of Thesis, "A Synthetic Study of Some Tertiary Phosphine and
Phosphite Complexes of Rhodium and Iridium".
Supervisors, Dr. E. Singleton and Professor W.J.A. Steyn.

University University of South Africa
Course Computer Science III (1975) and Mathematical Statistics III (1976)
plus ancillary subjects. All for non-degree purposes.
First class passes in all 8 subjects taken.

University University of Natal, Pietermaritzburg.
Courses Mathematics III and Statistics III (1977), for non-degree purposes
Awards Certificates of Merit for both subjects
Degree B.Sc. (Hons.) (1979). Subject, Statistics, first class pass.

EXPERIENCE

Employment.

1967-1971 Assistant Research Officer; Research Officer in the Inorganic Division
of the National Chemical Research Laboratories, C.S.I.R., Pretoria.

- 1972 Research worker in the Department of Theoretical Chemistry, University of Sussex, England.
- 1975 Lecturer in Chemistry in the Department of Physiology and Medical Biochemistry at the University of Cape Town, being responsible for the teaching of the first-year Chemistry course to the para-medical students, as well as being involved in the teaching of senior physiology students.
- 1978 to 2004 Lecturer, from 1984 Senior Lecturer, from 1994 Associate Professor, and from 1998 full Professor of Statistics in the School of Mathematics, Statistics and Information Technology, University of KwaZulu-Natal Pietermaritzburg, South Africa.
- 2005 to 2009 Full Professor in the Department of Statistical Sciences, University of Cape Town, South Africa.
- 2010 Contract Lecturer in the Department of Statistical Sciences, University of Cape Town, South Africa.
- 2011 to 2012 Visiting Professor in the Department of Statistical Sciences, University of Cape Town, South Africa.
- 2013 to date Emeritus Professor in the Department of Statistical Sciences, University of Cape Town, South Africa.

Sabbatical Leave.

- 1982 One year spent in the Statistical Laboratory, Cambridge University, England.
- 1987 Six months spent in the Department of Statistics, University of North Carolina at Chapel Hill, U.S.A.
- 1992 Six months spent in the Department of Statistics, Purdue University, Indiana, U.S.A.
- 1997 Six months spent in the Department of Statistics, Purdue University, Indiana, U.S.A.
- 2003 Six months spent in the Department of Statistics, the Ohio State University, Columbus, Ohio, U.S.A.
- 2011 Two months spent as a Visiting Fellow at the Isaac Newton Institute for Mathematical Sciences, Cambridge University, England.

AWARDS

B3 Research Rating with the NRF.

Thomas W. Teal award for the best statistical article published in the *Drug Information Journal* in 2006.

Sichel Medal awarded by the South African Statistical Association for the best paper published by their membership in an international journal in 2008.

COMMITTEES

President of the South African Statistical Association in 1999 and Member of the Executive Committee 1998-2002.

Member of the NRF Assessment Committee for Mathematical Sciences, 1997-1999, and Convener for 1998-1999.

Member of the NRF Committee for Funding for Mathematical Sciences, 1999-2001.

Member of the Local Organizing Committee and of the International Program Committee of the International Conference on the Teaching of Statistics 6 held in Cape Town in July, 2002.

Member of the Scientific Program Committee of the 21st International Workshop on Statistical Modelling held in Galway, Ireland, in July, 2006.

Member of the International Program Committee of the XXIVth International Biometric Conference to be held in Dublin, Ireland, in July 2008.

Member of the NRF Evaluation Committee for Mathematical Sciences, 2010-2012.

EDITORIAL DUTIES

Associate Editor : Journal of Statistical Planning and Inference, 2000-2011

Past Associate Editor : Statistical Modelling, 2000-2008

Past Editor : South African Statistical Journal, 2000-2003

Reviewer: Mathematical Reviews, 2002-to date.

EXTERNAL EXAMINER

External examiner for a number M.Sc. degrees offered at South African Universities and for Ph.D. degrees offered at the Universities of Cambridge, the Free State, Stellenbosch and the Witwatersrand.

External examiner for a range of undergraduate and Honours courses offered by Statistics departments at the Universities of Stellenbosch, the Free State, the Witwatersrand and UKZN.

REFEREE

Refereed papers for the following journals:- The American Statistician, Annals of Statistics, Biometrics, Biometrika, Canadian Journal of Statistics, Catalysis Today, Chemometrics and Intelligent Laboratory Systems, Communications in Statistics - Theory and Methods, Computational Statistics and Data Analysis, Ecological Modelling, European Journal of Operational Research, Industrial and Engineering Chemistry Research, International Journal of

Chemical Reactor Engineering, International Journal of Systems Science, Journal of Agricultural, Biological and Environmental Statistics, Journal of Biopharmaceutical Statistics, Journal of Chemometrics, Journal of Multi-Criteria Decision Analysis, Journal of the American Statistical Association, Journal of the Italian Statistical Association, Journal of the Royal Statistical Society Series B, Journal of Statistical Computation and Simulation, Journal of Statistical Planning and Inference, Mathematical Reviews, Statistica Sinica, Statistical Modelling, Statistical Methodology, Statistics and Computing, South African Statistical Journal, Technometrics

RESEARCH STUDENTS

M.Sc. by thesis - Complete.

1. C.P. Schreuder. 1995. "A Neural Network Approach for the Computation of Properties of the Analytic Hierarchy Process with Interval Judgements"
2. D. Moodley. 1996. "Artificial Neural Networks for Image Recognition: a Study of Feature Extraction Methods and an Implementation of Handwritten Character Recognition".
3. A.N. Walton. 1997. "Forecasting the Monthly Electricity Consumption in Municipalities in KwaZulu-Natal".
4. L. Els. 1999. "Applying Neural Networks to Speech Recognition".
5. B.A.S. Nonyane. 2000. "Nonlinear Mixed Models: The Classical and the Bayesian Approaches".
6. S. Brittain. 2000. "Nonlinear Models for Neural Networks".
7. M.G. Kabera. 2003. "A Statistical Approach to the Analytic Hierarchy Process".
8. N.M. Nkwanyana. 2003. "Statistical Models for Pharmacokinetic Data".
9. K. Leask. 2003. "Wadley's Problem with Overdispersion". Upgraded to a Ph. D.
10. I. S. Talke. 2004. "Modelling Volatility in Time Series Data".
11. Y. G. Habtelsellassie. 2004. "Group Screening with Imperfect Testing".
12. K. M. Miller. 2007. "Geographically Weighted Regression and an Extension".
13. M. B. Bongers. 2008. "Multivariate Volatility Modelling in Modern Finance".
14. H. Sumbhoolaul. 2008. "Estimation of Value-at-Risk and Expected Shortfall using Copulas".
15. M. Lacerda. 2008. "Testing for Purchasing Power Parity and Uncovered Interest Parity in the Presence of Monetary and Exchange Rate Regime Shifts".

16. C-A. Adam. 2008. "Selecting Groups of Genes that are Predictive of an Outcome".
17. D. Steyn. 2008. "Portfolio Construction using Index Regression Models".
18. L. Punt. 2010. "Representing and Modelling Spatio-Temporal Ecological Data".
19. J-C. Clur. 2010. "Nonparametric Smoothing in Extreme Value Theory".
20. C. T. M. Mancuveni. 2011. "Application of Extreme Value Theory and Coherent Risk Measures to the Market Risk of South African Hedge Funds".
21. T. Jensen. 2011. "Modelling Conditional Covariances with Orthogonal Factor Models".
22. M. Z. Ngwenya. 2011. "Investigating Optimal Kriging Variance Estimation: Analytic and Bootstrap Estimators".
23. J. P. Holloway. 2011. "Time Series Analysis of Count Data with an Application to Cholera Cases".
24. T. Chatora. 2013. "Detection and Down-weighting of Outliers in Non-normal Data: Theory and Application".
25. L. Dalmeyer. 2013. "Structural Time Series Modelling for 18 Years of Kapenta Fishing in Lake Kariba".

Ph.D. by thesis - Complete.

1. Legesse Kassa Debusho. 2004. "Optimal Design for Linear Mixed Models".
2. Kerry Leigh Leask. 2009. "Wadley's Problem with Overdispersion".
3. Muregancuro Gaëtan Kabera. 2010. "*D*-optimal Designs for Drug Synergy".

Current students.

1 M.Sc. student at UCT and 1 Ph. D. student at UP are working under my co-supervision at present.

LIST OF PUBLICATIONS

Refereed Publications.

1. L.M. Bower and M.H.B. Stiddard. "An Examination of the Significance of Approximate CO Stretching Force Constants." *Inorg. Chim. Acta*, 1967, **1**, 231.
2. L.M. Bower and M.H.B. Stiddard. "The Infrared Spectra of Some Carbonyl Complexes Containing Metal-Metal Bonds." *J.C.S. (A)*, 1968, 706.
3. L.M. Bower and M.H.B. Stiddard. "Infrared Spectra of Some Cobalt Complexes." *J. Organometal. Chem.*, 1968, **13**, 235.

4. L.M. Bower and M.H.B. Stiddard. "Comparison of Carbonyl Stretching Frequencies." *J.C.S. (A)*, 1968, 2264.
5. L.M. Bower and M.H.B. Stiddard. "The Vibrational Spectra of Transition Metal Carbonyls." *Adv. Inorg. Radiochem.*, 1969, **12**, 53.
6. L.M. Haines. "Some Tertiary Phosphine and Phosphite Complexes of Rhodium (I)." *Inorg Nucl. Chem. Letters*, 1969, **5**, 399.
7. M.J. Nolte, G. Gafner and L.M. Haines. "An Example of the Coordination of the Tetraphenylboron Anion to a Transition Metal through an Arene Ring." *Chem. Commun.*, 1969, 1406.
8. L.M. Haines. "Some Reactions of Compounds of the Type $[(Diene)RhX]_2$ (diene = cycloocta-1,5-diene, bicyclo-2.2.1-hepta2,5-diene; X = Cl, Br) with Tertiary Phosphines and Phosphites." *Inorg. Chem.*, 1970, **9**, 1517.
9. L.M. Haines and E. Singleton. "Some Unusual Cationic Complexes of Iridium." *J. Organometal. Chem.*, 1970, **25**, C83.
10. L.M. Haines. "Addition of Allyl Halides and Other Addenda Molecules to Some Cationic Derivatives of Rhodium (I)." *J. Organometal. Chem.*, 1970, **75**, C85.
11. L.M. Haines. "Cationic Complexes of Rhodium (I) and Their Reactivity toward Air." *Inorg. Chem.*, 1970, **10**, 1685.
12. L.M. Haines. "Addition and Oxidative Addition Reactions of Some Cationic Complexes of Rhodium (I)." *Inorg. Chem.*, 1971, **10**, 1693.
13. L.M. Haines, and E. Singleton. "Cationic Oxygen Adducts from Rhodium and Iridium Carbonyl Salts." *J. Organometal. Chem.*, 1971, **30**, C81.
14. L.M. Haines and E. Singleton. "Cationic Complexes of Iridium (I) containing Phosphites, Phosphines or Arsines as Ligands." *J.C.S. Dalton*, 1972, 1891.
15. L.M. Haines, J.N. Murrell, B.J. Ralston and D.J. Woodnutt. "Gaussian Cell Model for Molecular Orbitals." *J.C.S. Faraday Trans, II*, 1974, **70**, 1794.
16. W. P. Munoz, P. J. Moore, A. Mackinnon and L. M. Haines. "Biparietal Diameter and Menstrual Age in the Black Population Attending Edendale Hospital." *J. Clinical Ultrasound*, 1986, **14**, 681–688.
17. L. M. Haines. "The Application of the Annealing Algorithm to the Construction of Exact Optimal Designs for Linear Regression Models." *Technometrics*, 1987, **29**, 439–447.
18. L. M. Haines, W. P. Munoz and C.J. van Gelderen. "ARIMA Modelling of Birth Data." *Journal of Applied Statistics*, 1989, **16**, 55–67.
19. L. M. Haines, A. A. Rayner and I. M. Gravett. "The Analysis of an Unusual 2^4 Fractional Design." *South African Statistical Journal*, 1990, **24**, 185–209.

20. L. M. Haines. "Optimal Design for Inverse Quadratic Polynomials." *South African Statistical Journal*, 1992, **26**, 25–41.
21. L. M. Haines. "Optimal Design for Nonlinear Regression Models." *Communications in Statistics – Theory and Methods*, 1993, **22**, 1613–1627.
22. H. Dette and L. M. Haines. "E-optimal Designs for Linear and Nonlinear Models with Two Parameters." *Biometrika* , 1994, **81**, 739–754.
23. L. M. Haines. "A Note on the Differential Geometry of Least Squares Estimation for Nonlinear Regression Models." *South African Statistical Journal*, 1994, **28**, 73–91.
24. S. Mukhopadhyay and L. M. Haines. "Bayesian D-optimal Designs for the Exponential Growth Model." *Journal of Statistical Planning and Inference*, 1995, **44**, 385–397.
25. L. M. Haines. "A Geometric Approach to Optimal Designs for One-Parameter Nonlinear Models." *Journal of the Royal Statistical Society, Series B*, 1995, **57**, 575–598.
26. G. P. Y. Clarke and L. M. Haines. "Optimal design for Models incorporating the Richards Function." *Statistical Modelling. Proceedings of the 10th International Workshop on Statistical Modelling, Innsbruck*, 1995, 61–66.
27. L. M. Haines. Contribution to the discussion of "The Usefulness of Optimum Experimental Designs." by A. C. Atkinson. *Journal of the Royal Statistical Society, Series B*, 1996, **58**, 104–105.
28. A. C. Atkinson and L. M. Haines. Chapter 14: "Designs for Nonlinear and Generalized Linear Models". *Handbook of Statistics. Volume 13. Design and Analysis of Experiments*, Editors: S. Ghosh and C. R. Rao, Elsevier. 1996, 437-475.
29. S. Brittain and L. M. Haines. "Nonlinear Models for Neural Networks". *Mathematics of Neural Networks : Models, Algorithms and Applications*, Editors: S. W. Ellacott, J. C. Mason and I. J. Anderson, 1997, 129-133. Kluwer, Boston.
30. L. M. Haines. "A Statistical Approach to the Analytic Hierarchy Process with Interval Judgements. (I) Distributions on feasible regions" *European Journal of Operational Research*, 1998, **110**, 112–125.
31. L. M. Haines. "A Class of Equivalent Problems in Statistics and Operational Research". *South African Statistical Journal*, 1998, **32**, 43-66.
32. L.M. Haines. "Interval Judgements in the Analytic Hierarchy Process : A Statistical Perspective." *Proceedings of the 13th International Conference on Multi-Criteria Decision Making*, Editors: T.J.Stewart and R.C. van den Honert, Springer-Verlag, New York. 1998, 87–95.
33. L. M. Haines. "Optimal Design for Neural Networks". *New Developments and Applications in Experimental Design*, Editors: N. Flournoy, W.F. Rosenberger and W.K. Wong, Institute of Mathematical Statistics, Hayward, CA. 1998, 152–162 1998.

34. K. J. Abraham and L. M. Haines. “A New Technique for Sampling Multi-Modal Distributions.” *Journal of Computational Physics*, 1999, **155**, 380–386.
35. H. Dette, L. M. Haines and L. Imhof. “Optimal Designs for Rational Models and Weighted Polynomial Regression.” *Annals of Statistics*, 1999, **27**, 1272–1293.
36. L. M. Haines. Contribution to the discussion of “Optimal designs in flexible models, including feed-forward networks and nonparametric regression .” by D. M. Titterton. *Optimum Design 2000*, Editors: A. C. Atkinson, B. Bogacka and A. Zhigljavsky, 2001, 272–273. Kluwer, Dordrecht.
37. L. M. Haines, G.P.Y. Clarke, E. Gouws and W. F. Rosenberger. “Optimal Designs for Testing Anti-Malarial Drugs.” *mODa 6 - Advances in Model-Oriented Design and Analysis*, Editors: A. C. Atkinson, P. Hackl and W. Müller, 2001, 119–126. Physica-Verlag, Heidelberg.
38. W. F. Rosenberger, L. M. Haines and I. Perevozskaya. “Constrained Bayesian Optimal Designs for Phase I Clinical Trials.” *mODa 6 - Advances in Model-Oriented Design and Analysis*, Editors: A. C. Atkinson, P. Hackl and W. Müller, 2001, 225–233. Physica-Verlag, Heidelberg.
39. T. O’Connor, L. M. Haines and H. A. Snyman. “Influence of Precipitation and Species Composition on Phytomass of a Semi-Arid Grassland.” *Journal of Ecology*, 2001, **89**, 850-860.
40. W. F. Rosenberger and L. M. Haines. “Competing Designs for Phase I Clinical Trials: a Review.” *Statistics in Medicine*, 2002, **21**, 2757-2770.
41. L. M. Haines, I. Perevozskaya and W. F. Rosenberger. “Constrained Bayesian Optimal Designs for Phase I Clinical Trials.” *Biometrics*, 2003, **59**, 591-600.
42. I. Perevozskaya, W. F. Rosenberger and L. M. Haines. “Optimal Design for the Proportional Odds Model.” *Canadian Journal of Statistics*, 2003, **31**, 225–235.
43. L. M. Haines. “An Approach to Simple Bargaining Games and Related Problems.” *Journal of Statistical Planning and Inference*, 2003, **116**, 353–366.
44. B. G. Lovegrove and L. M. Haines. “The Evolution of Placental Mammal Body Sizes: Evolutionary History, Form, and Function” *Oecologia*, 2004, **138**, 13-27.
45. L.M. Haines, T.E. O’Brien and G.P.Y. Clarke. “Kurtosis and Curvature Measures for Nonlinear Regression Models.” *Statistica Sinica*, 2004, **14**, 547–570.
46. W. F. Rosenberger, G. C. Canfield, I. Perevozskaya, L. M. Haines and P. Hausner. “Development of interactive software for Bayesian optimal phase I clinical trial design.” *Drug Information Journal*, 2005, **39**, 89-98.
47. H. Dette, L. M. Haines and L. Imhof. “Bayesian and maximin optimal designs for weighted polynomial regression models.” *Canadian Journal of Statistics*, 2005, **33**, 221-241.

48. L. M. Haines. “Evaluating the Performance of Non-standard Designs: The San Cristobal Design”. *Response Surface Methodology and Related Topics*, Edited Volume, Chapter 11, 2006.
49. G. Liu, W.F. Rosenberger and L. M. Haines. “Sequential designs for logistic phase I clinical trials.” *Journal of Biopharmaceutical Statistics*, 2006, **16**, 605–621.
50. H. Dette, L. M. Haines and L. Imhof. “Maximin optimal designs for linear and non-linear regression models.” *Statistica Sinica*, 2007, **17**, 463–480.
51. L. M. Haines, M. G. Kabera, P. Ndlovu and T. E. O’Brien. “ D -optimal designs for logistic regression in two variables.” *mODa 8 - Advances in Model-Oriented Design and Analysis*, Editors: B. Torsney, J. M. Rodríguez-Díaz and J. López-Fidalgo, 2007, 91-98.
52. L. K. Debusho and L. M. Haines. “ V - and D -optimal population designs for the simple linear regression model with a random intercept term.” *Journal of Statistical Planning and Inference*, 2008, **138**, 1116–1130.
53. G. Liu, W. F. Rosenberger and L. M. Haines. “Sequential Designs for Ordinal Phase I Clinical Trials.” *Biometrical Journal*, 2009, **51**, 335–347.
54. L. M. Haines. Commentary on the paper “Design of dose-escalation trials” by R. A. Bailey. *Statistics in Medicine*, 2009, **28**, 3742-3744.
55. L. M. Haines. Discussion of the paper “A general approach to D -optimal designs for weighted univariate polynomial regression models” by H. Dette and M. Trampisch. *Journal of the Korean Statistical Society*, 2010, **39**, 35–37.
56. R. L. J. Coetzer and L. M. Haines. “Optimal Design for Compositional Data.” *mODa 9 - Advances in Model-Oriented Design and Analysis*, Editors: A. Giovagnoli, A.C. Atkinson, B. Torsney, 2010, 57–64. Physica-Verlag, Heidelberg.
57. M. Lacerda, J. W. Fedderke and L. M. Haines. “Testing for purchasing power parity and uncovering interest parity in the presence of monetary and exchange rate regime shifts.” *South African Journal of Economics*, 2010, **78**, 363–382.
58. L. K. Debusho and L. M. Haines. “ D - and V -optimal population designs for the quadratic regression model with a random intercept term.” *Journal of Statistical Planning and Inference*, 2011, **141**, 889–898
59. R. L. J. Coetzer, L. M. Haines and L. P. Fatti. “Central Composite Designs for Estimating the Optimum Conditions for a Second-Order Model.” *Journal of Statistical Planning and Inference*, 2011, **141**, 1764–1773.
60. M. G. Kabera, L. M. Haines and P. Ndlovu. “A note on the construction of locally D - and D_S -optimal designs for the binary logistic model with several explanatory variables.” *Statistics and Probability Letters*, 2012, **82**, 865–870.

61. L. M. Haines. Contribution to the discussion of “Optimum design of experiments for statistical inference” by S. G. Gilmour and L. A. Trinca. *Applied Statistics*, 2012, **61**, 383–385.
62. M. G. Kabera and L. M. Haines. “A note on the statistical analysis of point judgment matrices.” *Orion*, 2013, **29**, 75–86.
63. N. Flournoy, L. M. Haines and W. F. Rosenberger. “A graphical comparison of response-adaptive randomization procedures.” *Statistics in Biopharmaceutical Research*, 2013, **5**, 126–141.
64. R. L. J. Coetzer and L. M. Haines. “Optimal Designs for Multiple-Mixture by Process Variable Experiments.” *mODa10 - Advances in Model-Oriented Design and Analysis*, Editors: A.C. Atkinson and D. Ucinski. Springer, Heidelberg, 2013, 45–53.
65. L. M. Haines. “A random walk approach for deriving exact expressions for probabilities associated with Efron’s biased coin design.” *South African Statistical Journal*, 2013, **47**, 123–125.
66. L. M. Haines and A. E. Clark. “The construction of optimal designs for dose-escalation studies.” *Statistics and Computing*, 2014, **24**, 101–109.
67. K. L. Leask and L. M. Haines. “Modelling overdispersion in Wadley’s problem using the beta-Poisson distribution.” *Communications in Statistics - Theory and Methods*. Available on line.

Submitted Papers

1. K. L. Leask and L. M. Haines. “The Altham-Poisson Distribution.” Submitted.
2. M. G. Kabera, L. M. Haines and P. Ndlovu. “The analytic construction of D -optimal designs for the two-variable binary logistic regression model without interaction.” Submitted.
3. C. Thiart, M. Z. Ngwenya and L. M. Haines. “Investigating ‘Optimal’ Kriging Variance Estimation using an Analytic and a Bootstrap Approach.” Submitted.
4. L. M. Haines and H. Sadiq. “Start-up designs for response-adaptive randomization procedures with sequential estimation.” Submitted.

Book chapter

1. L. M. Haines. Chapter 2: “Introduction to Linear Models”. *Handbook of Design and Analysis of Experiments*, Editors: D. Bingham, A. M. Dean, M. D. Morris and J. Stufken, Chapman & Hall/CRC. Accepted for publication.

Book Reviews.

1. L. M. Haines. “Book Review : Experimental Design Made Easy.” *Statistics in Medicine*, 1998, **17**, 2651-2652.

Refereed Local Conference Proceedings.

1. Kabera, M. G. and Haines, L. M. (2010). “A Statistical Approach to the Analytic Hierarchy Process”, in P. Debba, F. Lombard, V. S. S. Yadavalli, and L. P. Fatti (eds), em Peer-reviewed Proceedings of the 52nd Annual Conference of the South African Statistical Association for 2010 (SASA 2010), 28–35.
2. L. K. Debusho. and Haines, L. M. (2010). “*D*-optimal population designs for the simple lineae random coefficients model”, in P. Debba, F. Lombard, V. S. S. Yadavalli, and L. P. Fatti (eds), em Peer-reviewed Proceedings of the 52nd Annual Conference of the South African Statistical Association for 2010 (SASA 2010), 52–59.

Unrefereed Conference Proceedings.

1. L. M. Haines. “Least Squares Estimation in Nonlinear Regression Models.” *American Statistical Association : Proceedings of the Statistical Computing Section 1989*, 1990, 122–127.
2. H. Dette and L. M. Haines. “E-Optimality for Two-Parameter Linear and Nonlinear Models.” *American Statistical Association : Proceedings of the Statistical Computing Section 1993*, 1994, 129–133.
3. L.M. Haines. “Maximum Likelihood Estimation for PET Scans.” *Proceedings of the 28th Symposium on the Interface : Computer Science and Statistics, Sydney, Australia 1996*, 1997, **28**, 106–109.
4. L.M. Haines. “An Approach to Bayesian Group Decision Making.” *Proceedings of the Section of Bayesian Statistical Science, American Statistical Association, 1997*, 1998, 147–152.
5. L. M. Haines and I. N. Litvine. “A Statistical Analysis of Judgement Matrices in the Analytic Hierarchy Process.” *Statistical Modelling. Proceedings of the 14th International Workshop on Statistical Modelling, Graz*. 1999, 228–234.

Papers presented at conferences.

1. L. M. Haines. “An investigation into the Maximum Likelihood Estimators of a Non-linear Regression Model.” South African Statistical Association Annual Conference, Johannesburg, South Africa, 1980.
2. L. M. Haines. “Exact Optimal Experimental Design : The Use of The Metropolis Algorithm.” South African Statistical Association Annual Conference, Durban, South Africa, 1983.

3. L. M. Haines. "Optimal Experimental Design for Nonlinear Models." South African Statistical Association Annual Conference, Stellenbosch, South Africa, 1984.
4. L. M. Haines. "Data-Induced Linear Relationships between the Solutions to the Normal equations of an Irregular 2^4 Design." South African Statistical Association Annual Conference, Berg 'n Dal, Kruger Park, South Africa, 1985.
5. L. M. Haines. "The Use of the Annealing Algorithm in Solving Combinatorially Difficult Problems." Annual Conference of the Operational Research Society of South Africa, Pietermaritzburg, South Africa, 1985.
6. L. M. Haines. "A Time Series Analysis of Births at Edendale Hospital in Natal." South African Statistical Association Annual Conference, Port Elizabeth, South Africa, 1986.
7. L. M. Haines. "Differential Geometry of Least Squares Estimation in Nonlinear Regression Models." South African Statistical Association Annual Conference, Pretoria, 1988.
8. L. M. Haines. "Least Squares Estimation in Nonlinear Regression Models." Joint Meetings of the American Statistical Association, Washington D.C., U.S.A, 1989.
9. L. M. Haines. "Least Squares Estimation in Nonlinear Regression Models." South African Statistical Association Annual Conference, Johannesburg, South Africa, 1989.
10. L. M. Haines. "Time Series Analysis of the Maternity data of Edendale Hospital in Natal." Kwazulu-Natal Mathematics Conference, Durban, South Africa, 1990.
11. L. M. Haines. "Optimal Design for Nonlinear Regression Models." South African Statistical Association Annual Conference, Cape Town, South Africa, 1990.
12. L. M. Haines. "Optimal Design for Inverse Quadratic Polynomials." Kwazulu-Natal Mathematics Conference, Pietermaritzburg, South Africa, 1991.
13. L. M. Haines. "Growth Curves and the Richards' Function." South African Statistical Association Annual Conference, Pretoria, South Africa, 1991.
14. L. M. Haines. "Optimal Design for Inverse Quadratic Polynomials." Winter Conference of the American Statistical Association, Louisville, Kentucky, 1992.
15. L. M. Haines. "Optimal Bayesian Design for Nonlinear Regression Models." Fifth Purdue International Symposium on Statistical Decision Theory and Related Topics, Purdue, U.S.A., 1992.
16. L. M. Haines. "Neural Networks : A Statistical Perspective." Annual Conference of the Operational Research Society of South Africa, Stellenbosch, South Africa, 1992.
17. L. M. Haines and H. Dette. "A Geometric Approach to E-Optimality." South African Statistical Association Annual Conference, Port Elizabeth, South Africa, 1992.
18. L. M. Haines. "Neural Networks : A Statistical Perspective." Kwazulu-Natal Mathematics Conference, Zululand, South Africa, 1993.

19. L. M. Haines. "E-Optimality for Two Parameter Linear and Nonlinear Models." Joint Meetings of the American Statistical Association, San Francisco, U.S.A., 1993.
20. L. M. Haines. "An Approach to Solving Problems in Group Decision Making." Annual Conference of the Operational Research Society of South Africa, Pietermaritzburg, South Africa, 1993.
21. L. M. Haines. "Using the Metropolis Algorithm to Sample from Bi-modal Distributions." Annual Conference of the South African Statistical Association, Pietermaritzburg, South Africa, 1993.
22. L. M. Haines. "The Analytic Hierarchy Process with Interval Judgements." Kwazulu-Natal Mathematics Conference, Durban, South Africa, 1994.
23. P. Schreuder, L. M. Haines, and D. Petkov. "Preference Assessment in AHP with Interval Judgements using Neural Networks." International 94 Pretoria Conference : Intelligent Systems, Pretoria, South Africa, 1994.
24. L. M. Haines. "Problems in Statistics which are Equivalent to the Construction of Optimal Bayesian Designs." Royal Statistical Society International Conference, Newcastle upon Tyne, U.K., 1994.
25. L. M. Haines. "Optimal Design, Finite Mixture Distributions, and Multi-Bayesian Decision Making - A Connection." South Africa Statistical Association Annual Conference, Berg 'n Dal, Kruger Park, South Africa, 1994.
26. L. M. Haines. "A Statistical Insight into the Maximum Likelihood Reconstruction of PET scans." Kwazulu-Natal Mathematics Conference, Durban, South Africa, 1995.
27. G. P. Y. Clarke and L. M. Haines. "Optimal Design for Models incorporating the Richards Function." 10th International Workshop on Statistical Modelling, Innsbruck, Austria, 1995.
28. S. Brittain and L. M. Haines. "Nonlinear Models for Neural Networks." 1st International Conference on Mathematics of Neural Networks and Applications, Oxford, U.K., 1995.
29. L. M. Haines. "Interval Judgments in the Analytic Hierarchy Process - A Statistical Perspective." Operational Research Society of South Africa Conference, Broederstroom, South Africa, 1995.
30. G. P. Y. Clarke, L. M. Haines, and T. E. O'Brien. "Curvature Measures and Confidence Intervals for Individual Parameters in Nonlinear Regression Models." South Africa Statistical Association Annual Conference, Bloemfontein, South Africa, 1995.
31. L. M. Haines. "Maximum Likelihood Estimation for PET scans." Fourth Meeting of the East, Central and Southern African Network of the International Biometric Society, Stellenbosch, South Africa, 1995.

32. L. M. Haines. "Problems in Statistics which are Equivalent to the Construction of Optimal Bayesian Designs." The XVIIIth International Biometric Conference, Amsterdam, Holland, 1996.
33. L. M. Haines. "Maximum Likelihood Estimation for PET scans." Sydney International Statistical Congress, Sydney, Australia, 1996.
34. L. M. Haines. "Maximum Likelihood Estimation for PET scans." South Africa Statistical Association Annual Conference, Stellenbosch, South Africa, 1996.
35. L.M. Haines. "Interval Judgements in the Analytic Hierarchy Process : A Statistical Perspective." 13th International Conference on Multi-Criteria Decision Making, Cape Town, South Africa, 1997.
36. L. M. Haines. "Markov Chain Monte Carlo Techniques in Statistics." Kwazulu-Natal Mathematics Conference, Durban, South Africa, 1997.
37. L. M. Haines. "Optimal Design for Neural Networks." AMS-IMS-SIAM Summer Research Conference on Experimental Design, Seattle, U.S.A., 1997.
38. G.P.Y. Clarke, L. M. Haines, Y. Fu. "Kriging and Field Experiments." 51st Session of the International Statistics Institute, Istanbul, Turkey, 1997.
39. L.M. Haines. "Optimal Design and Differential Equations." Kwazulu-Natal Mathematics Conference, Durban, South Africa, 1998.
40. L. M. Haines. "D-Optimal Designs for a Class of Weighted Polynomial Models." Advances in Model-Oriented Data Analysis and Experimental Design, Marseille, France, 1998.
41. K. J. Abraham and L. M. Haines. "Bayesian Analysis for Non-linear Models using Novel Independence Samplers." South African Statistical Association Annual Conference, Eskom MidRand, 1998.
42. K. J. Abraham and L. M. Haines. "Bayesian Analysis for Nonlinear Models using Novel Independence Samplers." The XIXth International Biometric Conference, Cape Town, South Africa, 1998.
43. L. M. Haines, G. P. Y. Clarke, E. Gouws and W. F. Rosenberger. "Modelling Responses to Anti-Malarial Drugs." Kwazulu-Natal Mathematics Conference, Durban, South Africa, 1999.
44. L. M. Haines and I. N. Litvine. "A Statistical Analysis of Judgement Matrices in the Analytic Hierarchy Process." 14th International Workshop on Statistical Modelling, Graz, Austria, 1999.
45. L. M. Haines and I. N. Litvine. "A Statistical Analysis of Judgement Matrices in the Analytic Hierarchy Process." South African Statistical Association Annual Conference, Durban, 1999.

46. L. M. Haines. "Screening blood samples for rare diseases - a problem in probability." Kwazulu-Natal Mathematics Conference, Pietermaritzburg, South Africa, 2000.
47. L. M. Haines and L. Kassa. "Optimal Design for Linear Mixed Models." The XXth International Biometric Conference, Berkeley, U.S.A., 2000.
48. L. M. Haines, W.F. Rosenberger and I. Perevoskaya "Optimal Design for Phase I Clinical Trials." South African Statistical Association Annual Conference, Johannesburg, 2000.
49. L. M. Haines, G.P.Y. Clarke, E. Gouws and W. F. Rosenberger. "Optimal Designs for Testing Anti-Malarial Drugs." mODa 6 - Model-Oriented Design and Analysis, Vienna, 2001.
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51. H. Dette, L. M. Haines and L. Imhof. "On the Construction of Maximin Optimal Designs." Royal Statistical Society Conference, Plymouth, U.K., 2002.
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53. L. M. Haines and K. Leask. "Overdispersion in Wadley's Problem." 19th International Workshop on Statistical Modelling, Florence, Italy, 2004.
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55. L. M. Haines, M. G. Kabera and I. N. Litvine. "Modelling Paired Comparisons in the Analytic Hierarchy Process." 25th European Meeting of Statisticians, Oslo, Norway, 2005.
56. L. M. Haines and L. K. Debusho. "Optimal Design for Linear Mixed Models." 21st International Workshop on Statistical Modelling, Galway, Ireland, 2006.
57. L. M. Haines. "Statistics for Microarrays in Teaching and Research." South African Statistical Association Annual Conference, Stellenbosch, 2006.
58. L. M. Haines, M. G. Kabera, P. Ndlovu and T. E. O'Brien. " D -optimal designs for logistic regression in two variables." mODa 8 - Model-Oriented Design and Analysis, Almagro, Spain, 2007.
59. L. M. Haines. "Network Designs for Microarrays" South African Statistical Association Annual Conference, Misty Hills, Gauteng, 2007.
60. K. L. Leask and L. M. Haines. "Overdispersion in Wadley's Problem: The Altham-Poisson Distribution." The XXIVth International Biometric Conference, Dublin, Ireland, 2008.

61. L. M. Haines. “Designs for Does-Escalation Studies” South African Statistical Association Annual Conference, University of Pretoria, Pretoria, Gauteng, 2008.
62. L. M. Haines and K. L. Leask. “Exponentially Weighted Poisson Models.” 24th International Workshop on Statistical Modelling, Cornell, Ithaca, USA, 2009.
63. L. M. Haines. Invited Talk: “Balancing Theory and Application: A South African Perspective.” 57th Session of the International Statistics Institute, Durban, South Africa, 2009.
64. L. M. Haines and R. L. J. Coetzer. Invited Talk: “Design for Compositional Data.” Stellenbosch Statistical Symposium, Stellenbosch, South Africa, 2009.
65. R. L. J. Coetzer and L. M. Haines. “Optimal Design for Compositional Data.” mODa 9 - Model-Oriented Design and Analysis, Bertinoro, Italy, 2010.
66. L. M. Haines. “Modelling Compositional Data in Industry.” South African Statistical Association Annual Conference, Potchefstroom, 2010.
67. L M Haines, G. Kabera and P. Ndlovu. “D-optimal designs for Two-Variable Binary Logistic Models with Interaction.” Designed Experiments: Recent Advances in Methods and Applications: DEMA 2011, Cambridge, England.
68. R. J. L. Coetzer and L. M. Haines. “Designs for Mixture Experiments”, South African Statistical Association Annual Conference, Pretoria, 2011.
69. L. B. Punt, L. M. Haines and C. Thiart. “Modelling the Movement of Dusky Kob in the Sundays River”, 27th International Workshop on Statistical Modelling, Prague, Czech Republic, 2012.
70. L. M. Haines. “Designs for Field Trials with Unreplicated Treatments.” South African Statistical Association Annual Conference, Port Elizabeth, 2012.

Technical Reports.

1. W. P. Munoz, L. M. Haines and C. J. van Gelderen. “An Analysis of the Maternity Data of Edendale Hospital in Natal for the Period 1970-1985. Part 1: Trends and Seasonality.” Internal Report, Edendale Hospital, Natal, South Africa, 1987.
2. L. M. Haines and A. A. Rayner. “Solutions to Singular Normal Equations.” Institute of Statistics, Mimeo Series #1741, Department of Statistics, University of North Carolina at Chapel Hill, 1987.
3. R. Coetzer and L. M. Haines. “Optimal Experimental Design for the Accurate Estimation of the Coupled Arrhenius Model for Fuels in Spark-Ignition Engines” Research Report PDR/06/0020/RTIS, Sasol, 2006.

Dissertations.

1. L. M. Bower. "The Infrared Spectra of some Carbonyl complexes Containing Metal-Metal Bonds." M.Phil. dissertation, University College London, 1967.
2. L. M. Haines. "A Synthetic Study of Some Tertiary Phosphine and Phosphite Complexes of Rhodium and Iridium." Ph.D dissertation, University of South Africa, 1970.