

## CURRICULUM VITAE

John Robinson

### **Present Position:**

Professor, School of Mathematics and Statistics, University of Sydney.

### **Degrees:**

University of Queensland, B.Sc. (1961)

University of Queensland, B.Sc. (Hons II, 1, Mathematics)(1963).

University of Sydney, Ph.D. (Mathematical Statistics)(1969). Thesis title: "Mixtures of Distributions".

### **Honours:**

1984: Elected Member of the International Statistical Institute.

1990: Elected Fellow of the Institute of Mathematical Statistics.

2008: Awarded the Pitman Medal of the Statistical Society of Australia.

### **Positions held:**

Biometrician, Queensland Department of Primary Industry, 1961-1964.

Lecturer, Biometry Section, Department of Agriculture, University of Sydney, 1964-1966.

Lecturer, Department of Mathematical Statistics, University of Sydney, 1966-1971.

Senior Lecturer, Department of Mathematical Statistics, University of Sydney, 1972-1982.

Associate Professor, Department of Mathematical Statistics, University of Sydney, 1983-1991.

Professor, School of Mathematics and Statistics, University of Sydney, 1991-  
Visiting Associate Professor, Department of Statistics, University of Connecticut, 1969-1970.

Visiting Associate Professor, Department of Statistics, University of Waterloo, Canada, 1975-1976.

Visiting Lecturer, Department of Statistics, University of California, Berkeley, 1979-1980.

Visiting Associate Professor, Department of Statistics, University of Rochester, NY, 1986, January-July.

### **Administration:**

Head of Department of Mathematical Statistics, University of Sydney, Jan-June, 1979; Sept. 1983-Dec. 1985; January 1988-December 1989. Head of School of Mathematics and Statistics, University of Sydney, Jan, 2001-Dec, 2002

### **Research Interests**

Asymptotic methods in statistics, resampling methods, multivariate analysis, modelling in biology.

#### **Post-graduate supervision:**

Doctoral Theses:

M.E. O'NEIL, (1975) "Problems in Dependence."

R.D. JOHN, (1981) "Asymptotic Approximations for Permutation Tests."

K.H. CHEN, (1981) "Distribution Theory on Common Factors from several Related Populations."

B Y JING (1993) "Saddlepoint and Edgeworth Expansions and their Application to Resampling"

P C THOMSON (1994) "Statistical Models of Synaptic Transmission."

C. MA (1998). "Asymptotic Approximations for Sample Quantiles."

R. JIN (2000). "Some Aspects of Saddlepoint Approximations for Non-parametric Statistics."

M. STEWART. (2002). "Asymptotic Methods for Tests of Homogeneity of Mixture Models."

F. ABABNEH. (2006). "Models and Estimation for Phylogenetic Models."

V. JAYASWAL. (2008). "General Markov Models for Nucleotide Sequence Evolution."

Masters Theses:

J. TYDEMAN, (1969).

R. HOMEL, (1972).

R.D. JOHN (1977).

K. HANSLOW (1985).

Y.Q. LIN (1992).

M.J. ANDERSON. (1998).

### Research Publications:

1. Field C, Robinson J, Ronchetti E. Saddlepoint approximations for multivariate M-estimates with applications to bootstrap accuracy, *Annals of the Institute of Statistical Mathematics*, 60 (2008), 205-224.
2. Hu Z, Ma C, Robinson J. Empirical saddlepoint approximations of the Studentized mean under stratified random sampling, *Statistics and Probability Letters*, 78 (2008), 396401.
3. Petrov VV, Robinson J. Large Deviations for Sums of Independent Non Identically Distributed Random Variables, *Communications in Statistics -Theory and Methods*, 37 (2008), 2984-2990.
4. Borovskikh YV, Robinson J. Large deviations of bootstrapped U-statistics, *Journal of Multivariate Analysis*, 99 (2008), 1793-1806.
5. Perera DI, Peiris MS, Robinson J, Weber NC. The empirical saddlepoint method applied to testing for serial correlation in panel time series data, *Statistics and Probability Letters*, 78 (2008), 2876-2882.
6. Jermin LS, Jayaswal V, Ababneh F, Robinson J. Phylogenetic model evaluation, *Bioinformatics: Data, Sequence Analysis and Evolution, Methods in Molecular Biology*, Humana Press, Totowa, NJ, (2008), 331-364. ISBN 978-1-58829-707-5
7. Kolassa JE, Robinson J. Conditional saddlepoint approximations for non-continuous and non-lattice distributions, *Journal of Statistical Planning and Inference*, 137 (2007), no. 1, 133-147. MR2292846
8. Hu Z, Petrov VV, Robinson J. On large deviations of sums of independent random variables, *Communications in Statistics-Theory and Methods*, 36 (2007), no. 10, 1981-1992.
9. Jayaswal V, Robinson J, Jermin L. Estimation of Phylogeny and Invariant Sites under the General Markov Model of Nucleotide Sequence Evolution, *Systematic Biology*, 56 (2007), no. 2, 155-162.
10. Hu Z, Robinson J, Wang Q. Cramér-Type Large Deviations for Samples from a Finite Population, *The Annals of Statistics*, 35 (2007), no. 2, 673-696. MR2336863
11. Hu Z, Robinson J, Wang Q. Edgeworth expansions for a sample sum from a finite set of independent random variables, *The Electronic Journal of Probability*, 12 (2007), 1402-1417. MR2354163
12. Ababneh F, Jermin LS, Robinson J. Generation of the exact distribution and simulation of matched nucleotide sequences on a phylogenetic tree, *Journal of mathematical modelling and algorithms*, 5 (2006), 291-308. MR2231570

13. Perera DI, Peiris MS, Robinson J, Weber NC. Saddlepoint approximation methods for testing of serial correlation in panel time series data, *Journal of Statistical Computation and Simulation*, 76 (2006), no. 11, 1001-1015. MR2255899
14. Ababneh F, Jermiin LS, Ma C, Robinson J. Matched-pairs tests of homogeneity with applications to homologous nucleotide sequences, *Bioinformatics*, 22 (2006), no. 10, 1225-1231.
15. Fung T, Robinson J. Continuity corrections for integer-valued saddlepoint approximations, *Statistics and Probability Letters*, 76 (2006), 1465-1469. MR2245566
16. Stewart M, Robinson J. Extremes of normed empirical moment generating function processes, *Extremes*, 6 (2005), 319-333.
17. Agho K, Dai W, Robinson J. Empirical saddlepoint approximations of the Studentized ratio and regression estimates for finite populations, *Statistics and Probability Letters*, 71 (2005), no. 3, 237-247. MR2126408
18. Welsh AH, Robinson J. Fisher and Inference for Scores, *International Statistical Review*, 73 (2005), no. 1, 131-150.
19. Jayaswal V, Jermiin L, Robinson J. Estimation of phylogeny using a general Markov model, *Evolutionary Bioinformatics Online*, 1 (2005), 62-80.
20. Robinson J, Wang Q. On the self-normalized Cramer-type large deviation, *Journal of Theoretical Probability*, 18 (2005), no. 4, 891-909. MR2300002
21. Robinson J. Multivariate tests based on empirical saddlepoint approximations, *Metron*, 62 (2004), 1-14. MR2089164
22. Jermiin LS, Ho SYW, Ababneh F, Robinson J, Larkum AWD. The Biasing effect of Compositional Heterogeneity on Phylogenetic Estimates May be Underestimated, *Systematic Biology*, 53 (2004), 6.
23. Jin R, Robinson J. Saddlepoint approximations of the two sample Wilcoxon statistic, *Crossing Boundaries: Statistical Essays in Honor of Jack Hall, The Symposium in Honor of the 70th Birthday of W. Jackson Hall, John E Kolassa and David Oakes (eds.)*, Institute of Mathematical Statistics. Lecture Notes Monograph Series, Institute of Mathematical Statistics, Beachwood, Ohio USA, (2003), 139-148. ISBN 0-940600-58-7
24. Jin R, Robinson J. Robust permutation tests for one sample, *Journal of Statistical Planning and Inference*, 116 (2003), 475-487. MR2000095
25. Anderson MJ, Robinson J. Generalized discriminant analysis based on distances, *Australian and New Zealand Journal of Statistics*, 45 (2003), 301-318. 2004f:62133

26. Robinson J, Ronchetti E, Young GA. Saddlepoint approximations and tests based on multivariate M-estimates, *The Annals of Statistics*, 31 (2003), 1154-1169. MR2001646
27. Jermin LS, Ho SYW, Abebneh F, Robinson J, Larkum AWD. Hetero: a program to simulate the evolution of DNA on a four-taxon tree, *Applied Bioinformatics*, 2 (2003), 159-163.
28. Jing BY, Kolassa JE, Robinson J. Partial saddlepoint approximations for transformed means, *Scandinavian Journal of Statistics. Theory and Applications*, 29 (2002), no. 4, 721-731. 2004d:62153
29. Dai W, Robinson J. Empirical saddlepoint approximations of the Studentized mean under simple random sampling, *Statistics and Probability Letters*, 53 (2001), 331-337. 2002c:62020
30. Anderson MJ, Robinson J. Permutation tests for linear models, *Australian and New Zealand Journal of Statistics*, 43 (2001), 75-88. 2002e:62037
31. Almudevar A, Field C, Robinson J. The density of multivariate M-estimates, *The Annals of Statistics*, 28 (2000), 275-297. 2001e:62013
32. Feuerverger A, Robinson J, Wong A. On the relative accuracy of certain bootstrap procedures, *Canadian Journal of Statistics*, 27 (1999), 225-236. 2000f:62073
33. Ma C, Robinson J. Saddlepoint approximations for the difference of order statistics and Studentized sample quantiles, *Journal of the Royal Statistical Society. Series B. Methodological*, 61 (1999), 563-577. 2000f:62121
34. Jin R, Robinson J. Saddlepoint approximation near the endpoints of the support, *Statistics and Probability Letters*, 45 (1999), 295-303. 2000i:62017
35. Keener RW, Robinson J, Weber NC. Tail probability approximations for U-statistics, *Statistics and Probability Letters*, 37 (1998), 59-65. 99b:60040
36. Ma C, Robinson J. Approximations to distributions of sample quantiles, *Order Statistics: Theory and Methods, Handbook of Statistics 16*, Elsevier Science B.V., Amsterdam, (1998), 463-484. ISBN 0-444-82091-4 MR1668756
37. Ma C, Robinson J. Saddlepoint approximations for sample and bootstrap quantiles, *Australian and New Zealand Journal of Statistics*, 40 (1998), 479-486. 99m:62068
38. Gibson WG, Bennett MR, Robinson J. Modelling the evoked release of quanta at active zones: theoretical investigation of the secretosome hypothesis, *Computational Neuroscience: Trends in Research, 1998, Sixth Annual Computational Neuroscience Conference*, James M. Bower (ed.), Plenum

Press, New York, (1998), 173-178. ISBN 0-306-45919-1

39. Robinson J, Skovgaard IbM. Bounds for probabilities of small relative errors for empirical saddlepoint and bootstrap tail approximations, *The Annals of Statistics*, 26 (1998), 2369-2394. 2000h:62017

40. Henery RJ, Robinson J, Bennett MR. Methods for grouping shapes of synaptic currents recorded from sets of synapses, *Journal of Neuroscience Methods*, 86 (1998), 79-90.

41. Bennett MR, Gibson WG, Robinson J. Probabilistic secretion of quanta and the synaptosecretosome hypothesis: evoked release at active zones of varicosities, boutons and endplates, *Biophysical Journal*, 73 (1997), 1815-1829.

42. Jing BY, Robinson J. Two-sample nonparametric tilting method, *The Australian Journal of Statistics*, 39 (1997), 25-34. 98d:62087

43. Thomas CM, Gibson WG, Robinson J. Stability and bifurcations in an associative memory model, *Neural Networks*, 9 (1996), 53-66.

44. Bennett MR, Robinson J, Phipps MC, Karunanithi S, Lin YQ, Cottee L. Quantal components of spontaneous potentials at visualised varicosities, *Journal of Autonomic Nervous System*, 56 (1996), 161-174.

45. Gibson WG, Bennett MR, Robinson J. Modeling the spontaneous release of quanta at active zones of varicosities, boutons and endplates, *Computational Neuroscience. Trends in Research 1995, Fourth Annual Computational Neuroscience Meeting*, JM Bower (ed.), Academic Press, (1996), 9-14.

46. Holst L, Quine MP, Robinson J. A general stochastic model for nucleation and linear growth, *Annals of Applied Probability*, 6 (1996), 903-921. 97i:60093

47. John RD, Robinson J. Rates of convergence to normality for samples from a finite set of random variables, *Journal of the Australian Mathematical Society. (Series A)*, 60 (1996), 355-362. 97d:60040

48. Phipps MC, Robinson J. Non-randomness in time-ordered neurobiological data, *Theory of Stochastic Processes*, 2 (1996), 234-240.

49. Bennett MR, Gibson WG, Robinson J. Probabilistic secretion of quanta: spontaneous release at active zones of varicosities, boutons and endplates, *Biophysical Journal*, 69 (1995), 42-56.

50. Thomas CM, Gibson WG, Robinson J. Stability and bifurcations in an associative memory model, *Proceedings of the Sixth Australian Conference on Neural Networks, Australian Conference on Neural Networks*, M. Charles and C. Latimer (eds.), (1995), 98-101.

51. Thomson NA, Lavidis NA, Robinson J, Bennett MR. Probabilistic

secretion of quanta at somatic motor-nerve terminals: the fusion pore model, quantal detection and autoinhibition, *Philosophical Transactions of the Royal Society of London. Series B*, 349 (1995), 197-214.

52. Karunathi S, Phipps MC, Robinson J, Bennett MR. Statistics of quantal secretion during long trains of sympathetic nerve impulses in mouse *vas deferens*, *Journal of Physiology*, 489 (1995), 171-181.

53. Bennett MR, Robinson J, Phipps MC. Spontaneous quantal secretions from single synaptic varicosities, *Proceedings Australian Neuroscience Society, Neuroscience (Canberra 1994)*, 5 (1994),

54. Bennett MR, Gibson WG, Robinson J. Dynamics of the CA3 pyramidal neuron autoassociative memory network in the hippocampus, *Philosophical Transactions of the Royal Society of London. Series A. Physical Sciences and Engineering*, 343 (1994), 167-187.

55. Gibson WG, Robinson J, Thomas CM. Stability and bifurcations in an autoassociative memory model, *European Symposium on Artificial Neural Networks*, Verleysen M (ed.), D Facto, Brussels, (1994), 7-12. ISBN 2-9600049-1-4

56. Jing BY, Feuerverger A, Robinson J. On the bootstrap saddlepoint approximations, *Biometrika*, 81 (1994), 211-215. 95a:62034

57. Jing BY, Robinson J. Saddlepoint approximations for marginal and conditional probabilities of transformed variables, *The Annals of Statistics*, 22 (1994), 1115-1132. 95k:62045

58. Gibson WG, Robinson J. Statistical analysis of the dynamics of a sparse associative memory, *Neural Networks*, 5 (1992), 645-661.

59. Quine MP, Robinson J. Estimation for a linear growth model, *Statistics and Probability Letters*, 15 (1992), 293-297.

60. Gibson WG, Robinson J, Bennett MR. Probabilistic secretion of quanta in the central nervous system: granule cell synaptic control of pattern separation and activity regulation, *Philosophical Transactions of the Royal Society of London. Series B*, 332 (1991), 199-220.

61. Bennett MR, Robinson J. Probabilistic secretion of quanta from nerve terminals of synaptic sites on muscle cells: non-uniformity, autoinhibition and the binomial hypothesis, *Royal Society of London. Proceedings. Series B*, 239 (1990), 329-358.

62. Quine MP, Robinson J. A linear random growth model, *Journal of Applied Probability*, 27 (1990), 499-509. 91i:60068

63. Robinson J, Hoglund T, Holst L, Quine MP. On approximating probabilities for small and large deviations on  $R_d$ , *The Annals of Probability*, 18

(1990), 727 - 753. 91i:60069

64. Gibson WG, Robinson J, Bennett MR. Probabilistic Secretion of Transmitter at Granule Cell Synapses: A Role in Pattern Separation and Activity Regulation, Proceedings of the First Australian Conference on Neural Networks, Australian Conference on Neural Networks, Sydney (January, 1990), (1990), 132-133.

65. Chen KH, Robinson J. Comparison of factor spaces of two related populations, *Journal of Multivariate Analysis*, 28 (1989), 190-203. 90g:62128

66. Robinson J. Limit theorems for standardized partial sums of weakly exchangeable arrays, *The Australian Journal of Statistics*, 31 (1989), 200 - 214. 91e:60081

67. Bennett MR, Robinson J. Growth and elimination of nerve terminals at synaptic sites during polyneuronal innervation of muscle cells: a tropic hypothesis, *Royal Society of London. Proceedings. Series B*, 235 (1988), 299 - 320.

68. Robinson J. Discussion of P. Hall's "Theoretical comparison of bootstrap confidence intervals", *The Annals of Statistics*, 16 (1988), 976-977.

69. Robinson J. Conditioning ratio estimates under simple random sampling, *Journal of the American Statistical Association*, 82 (1987), 826-831. 88h:62016

70. Robinson J. Nonparametric confidence intervals in regression: the bootstrap and randomization methods, *New Perspectives in Theoretical and Applied Statistics*, Puri ML, Vilaplana JP, Wertz W (eds.), Wiley, New York, (1987), 243 - 255. MR0900219

71. Gabriel KR, Robinson J. A note on simultaneous inference with randomization tests, *Communications in Statistics. Theory and Methods*, 16 (1987), 2007 - 1025.

72. Robinson J. Bootstrap and randomization confidence intervals, *Pacific Statistical Congress*, Francis IS, Manly BFJ, Lam FC eds (eds.), Elsevier Science Publishers, (1986), 49-50.

73. Quine MP, Robinson J. Efficiencies of chi-square and likelihood ratio goodness-of-fit tests, *The Annals of Statistics*, 13 (1985), 727-742. 86m:62095

74. Chen KH, Robinson J. Asymptotic Distribution of a goodness of fit statistic for factorial invariance, *Journal of Multivariate Analysis*, 17 (1985), 76-83. 86j:62117

75. Quine MP, Robinson J. Normal approximations to sums of scores based on occupancy numbers, *The Annals of Probability*, 12 (1984), 794-804. 85h:60035



76. John RD, Robinson J. Edgeworth expansions for the power of permutation tests, *The Annals of Statistics*, 11 (1983), 625-631. 85c:62042
77. John RD, Robinson J. Significance levels and confidence intervals for permutation tests, *Journal of Statistical Planning and Inference*, 16 (1983), 161-173.
78. Robinson J. Approximation to some test statistics for permutation tests in a completely randomized design, *The Australian Journal of Statistics*, 26 (1983), 358-369. 86a:62102
79. Quine MP, Robinson J. A Berry-Esseen bound for an occupancy problem, *The Annals of Probability*, 10 (1982), 663-671. 83i:60027
80. Robinson J. Saddlepoint approximations for permutation tests and confidence intervals, *Journal of the Royal Statistical Society. Series B. Methodological*, 44 (1982), 91-101. 84i:62029
81. Bickel PJ, Robinson J. Edgeworth expansions and smoothness, *The Annals of Probability*, 10 (1982), 500-503. 83m:60037
82. Brockwell P, Mielke PW, Robinson J. On non-normal invariance principles for multi-response permutation procedures, *The Australian Journal of Statistics*, 24 (1982), 33-41. 84h:60066
83. Robinson J. An asymptotic expansion for permutation tests with several samples, *The Annals of Statistics*, 8 (1980), 851-864. 82e:60042
84. Robinson J. Optimal tests of significance, *The Australian Journal of Statistics*, 21 (1979), 301-310. 82a:62013
85. Robinson J. An asymptotic expansion for samples from a finite population, *The Annals of Statistics*, 6 (1978), 1005-1011. 80i:62016
86. Bennett MR, Fisher C, Florin T, Quine MP, Robinson J. The effect of calcium ions and temperature on the binomial parameters that control acetylcholine release by a nerve impulse at amphibian neuromuscular synapses, *Journal of Physiology*, 271 (1977), 641-672. 87. Robinson J. Large deviation probabilities for samples from a finite population, *The Annals of Probability*, 5 (1977), 913-925. 56:6804
88. Robinson J. Estimated of parameters for a model of transmitter release at synapses, *Biometrics*, 32 (1976), 61-68.
89. Quine MP, Robinson J. Rates of convergence for some statistics from empirical distribution functions, *The Australian Journal of Statistics*, 17 (1975), 8-11. 52:12170
90. Robinson J. On the test for additivity under a randomization model, *Journal of the American Statistical Association*, 70 (1975), 184-185. 51:7183

91. Homel RJ, Robinson J. Nested partially balanced incomplete block designs, *Sankhyā. The Indian Journal of Statistics. Series B*, 37 (1975), 201-210. MR0654164
92. Robinson J, Schapel GJ, Edwards KDG. Potassium-sparing effect of amiloride in a diuretic factorial study in man, *Clinical and Experimental Pharmacology and Physiology*, 2 (1975), 277-287.
93. Robinson J. The large-sample power of permutation tests for randomization models, *The Annals of Statistics*, 1 (1973), 291-296. 50:11623
94. Robinson J. The analysis of covariance under a randomization model, *Journal of the Royal Statistical Society. Series B. Methodological*, 35 (1973), 368 - 376. 49:10082
95. Robinson J. The randomization model for incomplete block designs, *The Annals of Statistics*, 43 (1972), 480-489. MR0300374
96. Robinson J. A converse to a combinatorial limit theorem, *The Annals of Statistics*, 43 (1972), 2053-2057. 51:6930
97. Robinson J. On relationship algebras of incomplete block designs, *The Annals of Statistics*, 41 (1970), 648-650. MR0260116
98. Robinson J. Blocking in incomplete split designs, *Biometrika*, 57 (1970), 347-350.
99. Gyory AZ, Edwards KDG, Palmer AA, Robinson J. The relative importance of urinary pH and urinary content of citrate, magnesium and calcium in the production of nephrocalcinosis by diet and acetazolamide in the rat, *Clinical Science*, 39 (1970), 605-623.
100. Robinson J. The estimation of carrier rate from amoebic surveys, *J. Hyg. Camb.*, 66 (1968), 531-539.
101. Robinson J. Incomplete split plot designs, *Biometrics*, 23 (1967), 793 - 802. 36:6078
102. Balaam LN, Robinson J. Variance heterogeneity and error correlation in factorial experiments, *The Australian Journal of Statistics*, 9 (1967), 126-130. 37:3703
103. McLean S, Robinson J, Starmer GA, Thomas J. The influence of anaesthetic agents on the formation of methaemoglobin induced by aniline in cats, *Journal of Pharmacology*, 19 (1967), 803-809.
104. Robinson J. Balanced incomplete block designs with double grouping of blocks into replicates, *Biometrics*, 22 (1966), 368-373. 33:5060
105. Robinson J. The distribution of a general quadratic form in normal variates, *The Australian Journal of Statistics*, 7 (1965), 110-114. 33:6739

### **Research Grants**

ARGC 1986. General Multivariate Conditional Limit Theorems. \$6000 (with M.P. Quine)

ARC 1991, 1992, 1993. Hippocampal Granule Cell Synapses: Their Computational Role in Memory and Mechanisms of Quantal Secretion. \$130,000 each year (with M.R. Bennett and W.G. Gibson)

ARC 1994, 1995, 1996. Computational role of hippocampal synapses in memory. \$110,000 each year (with M.R. Bennett and W.G. Gibson).

ARC Institutional 1995, 1996, 1997 Asymptotic approximations and their application in resampling and exchangeable arrays. \$ 7000 each year (with N Weber).

ARC Institutional 1997 Stochastic modelling and inference problems from neurobiology. \$14,000 (with M.P. Quine).

ARC Institutional 1998, 1999. Asymptotic approximations in Statistics with applications to finite populations. \$ 13000, \$ 9000 (with N Weber).

ARC Institutional 1999 Stochastic modelling and inference for synaptic activity. (with M.P. Quine).

ARC Discovery 2004-2006 Empirical saddlepoint approximations and self normalized limit theorems \$75000, \$75000, \$75000 (with Q Wang)

ARC Discovery 2004-2006 (DP0453173: \$ 210000) Retracing the early evolution of Metazoa using novel methods and strategies. (Jermin I, Robinson J, Rouse G)

ARC Discovery 2007-2011 (DP0772881: \$ 664070) Asymptotic expansions and large deviations in probability and statistics: Theory and applications (Wang Q, Robinson J, Weber N)

### **Invited addresses at Conferences**

Invited speaker at the Symposium in Honour of H.O. Lancaster, Sydney, 1979.

Invited speaker at III International Meeting of Statistics in the Basque Country, Bilbao, 1985.

Invited speaker in the Resampling Session of the Pacific Statistical Congress, Auckland, 1985.

Invited speaker at the workshop on Robust Statistics and Small Sample Asymptotics, Melbourne, 1988.

Invited speaker at the workshop on Conditional Inference, ANU, 1991.

Invited participant at the subprogram on Robust Statistics and Other Computer Intensive Methods, Mathematical Research Institute, Berkeley, 1992.

Invited speaker at the workshop on New approximation techniques for statistical inference, Ascona, 1995.

Invited speaker at Sydney International Statistical Congress, July, 1996.

Invited speaker at the CRM Summer School on Likelihood and asymptotics, Banff, 1997.

Invited speaker at the workshop on Inference and Asymptotics, Ascona, 2000.

Invited speaker at IMS conference, Banff, 2002.

Invited speaker at Bernoulli Society EAPR conference, Hong Kong, 2003.

**Invited addresses at overseas universities**

University of Connecticut (1970, 1975, 1980, 1986) Princeton University (1970) University of California, San Diego (1970) University of Waterloo (1975, 1980, 1986) Queens University (1975) University of British Columbia (1975) University of Michigan (1975) University of California, Berkeley (1980) University of California, Santa Barbara (1980) University of California, Davis (1980) University of Rochester (1986) University of Minnesota (1986) University of Ottawa (1986) University of Toronto (1994) Dalhousie University, Halifax (1995) University of Copenhagen (1995) Royal Institute of Technology, Stockholm (1995) Dalhousie University, Halifax (2000)