

JIE MI

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EDUCATION

Ph.D., Statistics, 1991, University of Pittsburgh, Pittsburgh, PA

M.A., Mathematics, 1987, University of Pittsburgh, Pittsburgh, PA

M.S., Applied Mathematics, 1981, Shanghai Jiao Tong University, Shanghai, China

POSITIONS HELD (1981–PRESENT)

2001–present Professor, Department of Statistics, Florida International University, Miami, FL

1996–2005 Chairperson of the Department of Statistics, Florida International University, Miami, FL

1996–2001 Associate Professor, Department of Statistics, Florida International University, Miami, FL

1991–1996 Assistant Professor, Department of Statistics, Florida International University, Miami, FL

1981–1985 Assistant Professor, Department of Applied Mathematics, Shanghai Jiao Tong University, Shanghai, China

ACADEMIC HONORS

2001 Florida International University Faculty Research Award

2001 Matriculation Merit Award

1996–1997 Teaching Incentive Program Award

1996 Florida International University Faculty Teaching Award

1995 Florida International University Faculty Research Award

1990–1991 Andrew Mellon Predoctoral Fellowship, University of Pittsburgh

1989–1990 Andrew Mellon Predoctoral Fellowship, University of Pittsburgh

1988 Teplitz-Culver Award for outstanding academic achievement, University of Pittsburgh

1986 Award for Outstanding Performance in Research and/or Teaching, University of Georgia

COURSES TAUGHT AT FIU

STA–2023 *Statistics for Business and Economics*

STA–2122 *Introduction to Statistics I*

STA–3033 *Probability & Statistics for Computer Science*

STA–3111 *Statistics I*

STA–3112 *Statistics II*

STA–3123 *Introduction to Statistics II*

STA–3145 *Statistics for the Health Professions*

STA–3163 *Statistical Methods I*

STA–3164 *Statistical Methods II*

STA–4182 *Statistical Models*

STA–4234 *Introduction to Regression Analysis*

STA–4321 *Introduction to Mathematical Statistics I*

STA–4322 *Introduction to Mathematical Statistics II*

STA–4502 *Introduction to Nonparametric Methods*

STA–4664 *Statistical Quality Control*

STA–5236 *Regression Analysis*

STA–5505 *Nonparametric Methods*

STA–5664 *Advanced Statistical Quality Control*

STA–6166 *Statistical Methods in Research I*

STA–6167 *Statistical Methods in Research II*

STA–6326 *Mathematical Statistics I*

STA–6327 *Mathematical Statistics II*

STA–6246 *Linear Models*

STA–7707 *Multivariate Methods I*

STA–7708 *Multivariate Methods II*

MAP–5236 *Operations Research*

Other Teaching Activities

- Directed many independent studies in *Nonparametric Methods, Introduction to Mathematical Statistics I, Regression Analysis, Multivariate Methods, Reliability, Operations Research, and Categorical Data Analysis*.
- Directed Master Degree Theses for 12 graduate students of the Department of Mathematics and Statistics
- Served on more than 20 thesis/dissertation committees.

REFEREED PUBLICATIONS

1. Numerical methods for renewal equation, *Pacific Journal of Applied Mathematics* (with K. Hwan) (Forthcoming)
2. Limit of hazard rate function of coherent system with discrete life *Applied Stochastic Models in Business and Industry*. (Forthcoming)
3. Statistical Inference about Availability of System with Gamma Lifetime and Repair Time (2012), *International Journal of Reliability, Quality and Safty Engineering*, **18**, No. 1, (with M.Y. Lu) (Forthcoming)
4. Inference about Reliability Parameter with Gamma Strength And Stress (2012), *Journal of Statistical Planning and Inference*, **142**, 848–854 (with K. Hwan and Z.Y. Wang)
5. Some aspects of probability of correct selections (2011), *Communication in Statistics: Theory and Methods* **24**, 4484–4495 (with L. Fei)
6. On a stochastic survival model for a system under randomly variable environment (2011), *Methodology and Computing in Applied Probability* **13**, 549–561 (with J. H. Cha)
7. Some properties of hazard rate functions of systems with two components (2010), *Journal of Statistical Planning and Inference*, **140**, 444–453 (with S. Joo)
8. On the existence and uniqueness of the maximum likelihood estimators of normal and lognormal population parameters with grouped data, (with YY Zhou and J. Xia). *Journal of Probability and Statistics*
9. Estimation of quantities determined as implicit functions of unknown parameters, *Metrika* (2009), *Metrika*, **44**, 37–42.

10. Some Properties of Convolutions of Pascal and Erlang Random Variables (2008), *Statistics & Probability Letter*, **78**, 2378–2387 (with W. Shi and Y.Y. Zhou).
11. Modeling general standby system and evaluation of its performance (2008), *Applied Stochastic Models in Business and Industry*, **24**, 159–169 (with J. H. Cha and W. Y. Yon)
12. A note on the mean volume of confidence ellipsoid for the mean of multivariate normal distribution (2008), *Journal of Statistical Research*, **44** 37–42.
13. Burn-In and Maintenance Policies, *Encyclopedia of Statistics in Quality and Reliability 2008*, Volume 1, 261–266.
14. On optimal conditions for a data processing system: a stochastic approach (2008), *Applied Stochastic Models in Business and Industry*, **24**, 31–49 (with J.H. Cha).
15. Optimal burn-in procedures for periodically inspected systems (2007), *Naval Research Logistics: An International Journal*, **54**, 720–731 (with J.H. Cha).
16. Estimation of Parameters in Logistic and Log-logistic Distribution with Grouped Data (2007), *Lifetime Data Analysis*, **13**, 421–429 (with YY Zhou, S. Guo)
17. Order Statistics and Test Time (2008), *Journal of Statistical Planning and Inference*, **138**, 834–844.
18. Study on stochastic failure model in random environment (2007). *Journal of Applied Probability*, **44**, 151-163 (with Ji Hwan Cha).
19. Some Probability Functions in Reliability and Their Applications (2007), *Naval Research Logistics: An International Journal*, **54**, 128–135.
20. MLE of parameters of location-scale distribution for complete and partially grouped data (2006), *Journal of Statistical Planning and Inference*, **136**, 3565-3582.
21. Estimating the mean of exponential distribution from step-stress life test data. Ch. 20 of *Advances on Distribution Theory, Order Statistics and Inference*, 307–325, 2006, Birkhäuser Boston, Inc.(with Z. Chen and Y.Y. Zhou).

22. Limiting availability of system with non-identical lifetime distributions and non-identical repair time distributions (2006), *Statistics & Probability Letter*, **76**, 729–736.
23. Pseudo availability of repairable system (2006), *Methods and Computing in Applied Probability*, **8**, 93-103.
24. Testing for scale families using total variation distance (2006), *Journal of Statistical Computation and Simulation*, **76**, 773–792 (with S. Gulati).
25. Exact confidence region for the parameters of the gamma distribution based on two independent samples (2005). *Statistics*, **39**, 519–527 (with Z. Chen)
26. Optimal Burn-in Procedures in A Generalized Environment (2005), *International Journal of Reliability, Quality and Safty Engineering*, **12**, 189–201 (with Ji Hwan Cha)
27. Bounds to optimal burn-in time and optimal work size (2005). *Applied Stochastic Models in Business and Industry*, **21**, 227-239 (with J.H. Cha).
28. Bounding the optimal burn-in time for a system with two types of failure (2004), *Naval Research Logistics: An International Journal*, **51**, 1090–1101 (with J.H. Cha, S. Lee).
29. An optimal trade-off between content freshness and refresh cost (2004), *Journal of Applied Probability*, **41**, 721-734 (with Y.B. Ling).
30. A general approach to the shape of failure rate and MRL functions (2004), *Naval Research Logistics: An International Journal*, **51**, 543–556.
31. Comparison of Steady System Availability with Imperfect Repair (2004), *Applied Stochastic Models in Business and Industry*, **20**, 27–36 (with J.H. Cha, S. Lee).
32. Existence and uniqueness of the MLEs for normal distribution based on general progressively type II censored samples (2003), *Statistics & Probability Letter*, **64**, 407–414 (with N. Balakrishnan).
33. On comparison of two classification methods with survival endpoints, *Handbook of Statistics: Advances in Survival Analysis*, **Vol. 23**, 43–58, Edited by N. Balakrishnan and C. R. Rao. (with Y. Lu and H. Jin).

34. Shape and crossing properties of mean residual life functions (2003), *Statistics and Probability Letters*, **64**, 225–234 (with L. Bekker).
35. Stochastic dominance of random variables implies the dominance of their order statistics (2002), *Journal of Indian Statistical Association*, **40**, 161–168 (with M. Shaked).
36. Optimal burn-in time and eventually IFR (2003), *Journal of Chinese Institute of Industrial Engineering*, **20**, 533–542.
37. Inferences about the scale parameter of the Gamma distribution based on data mixed from censoring and grouping (2003), *Statistics and Probability Letters*, **62**, 229–243 (with A. Naranjo).
38. A Unified way of comparing the reliability of coherent systems (2003), *IEEE Transactions on Reliability*, **52**, 38–43.
39. On bounds to some optimal policies in reliability (2002), *Journal of Applied Probability*, **39**, 491–502.
40. Age-replacement policy and optimal work size (2002), *Journal of Applied Probability*, **39**, 296–311.
41. Stochastic order and MLE of the mean of exponential distribution (2002), *Methods And Computing In Applied Probability*, **4**, 83–93 (with N. Balakrishnan, and C. Brain).
42. Order Preserving Properties of Maximum Likelihood Estimator (2001), *Journal of Statistical Planning and Inference*, **98**, 89–99 (with N. Balakrishnan).
43. An Approximate Confidence Interval for the Scale Parameter of Gamma Distribution based on Grouped Data (2001), *Statistics Papers*, **42**, 285–299 (with Z. Chen).
44. Estimation of the change point of a distribution based on the number of failed test items (2001), *Metrika*, **53**, 31–38 (with Z. Chen and D. Ferger)
45. On some properties of the quantile of the chi-square distribution and their applications on interval estimation (2001), *Commun. Statist.–Theory Meth.*, **30**, 1851–1867 (with C. Brain).
46. Inspection-Age-Replacement Policy And System Availability (2001), Ch. 5 of *System And Bayesian Reliability*, 73–94, (with H. Zahedi), World Scientific.

47. Some comparison results of the reliability functions of some coherent systems (2001), *Handbook of Statistics: Advances in Reliability*, **vol. 20**, Edited by N. Balakrishnan and C.R. Rao, 215–225.
48. A variational calculus approach to optimal checkpoint replacement (2001), *IEEE TRANS. ON COMPUTERS*, **50**, 699–708 (with Y. Ling, and X. Lin)
49. Average number of events and average reward (2000), *Probability in the Engineering and Information Sciences*, **14**, 485–510.
50. Comparison of Renewable Warranties (1999), *Naval Research Logistics: An International Journal*, **46**, 91–106.
51. Burn-in and screening (1999), *Encyclopedia of Electrical and Electronics Engineering* (with H. W. Block, and T. H. Savits), **Vol. 2**, 618–624, John Wiley & Sons, Inc.
52. Age-smooth properties of mixture models (1999), *Statistics & Probability Letters*, **43**, 225–236.
53. Optimal active redundancy in k-out-of-n system (1999), *J. Appl.Prob.*, **36**, 927–933.
54. On measure of system interval availability (1999), *Probability in the Engineering and Information Sciences*, **13**, 359–375.
55. On the maximum likelihood estimators for the change point of the decreasing-constant hazard rate (1999), *Far East Journal of Theoretical Statistics* (with Z. Chen), **3**, 227–238.
56. Mean Residual Life and Its Association With Failure Rate (1999), *IEEE Transactions on Reliability* (with G. Ghai), **48**, 262–266.
57. A new explanation of decreasing failure rate of a mixture of exponentials (1998), *IEEE Transactions on Reliability* **47**, 460–462
58. Some Comparison Results of System Availability (1998), *Naval Research Logistics: An International Journal*, **45**, 205–218.
59. Bolstering Components for Maximizing System Lifetime (1998), *Naval Research Logistics: An International Journal*, **45**, 497–509.
60. Statistical estimation for the scale parameter of the Gamma distribution based on grouped data (1998), *Comm. Statist.–Theory Meth.* (with Z. Chen) **27:12**, 3035–3045.

61. Warranty Policies and Burn-in (1997), *Naval Research Logistics: An International Journal*, **44**, 199–209.
62. Limiting Behavior of Mixture of Discrete Lifetime Distributions, (1996), *Naval Research Logistics: An International Journal*, **43**, 365–380.
63. Burn-in at the Component and System Level (1996) (with H. Block and T. Savits), *Lifetime Data: Models in Reliability and Survival Analysis*, N. P. Jewell et al.(eds), p.53–58, Kluwer Academic Publishers, Netherlands.
64. Crossing Properties of F Distributions (1996), *Statistics & Probability Letters*, **27**, 289–294.
65. Strongly Consistent Estimation for Hazard Rate Models with a Change Point (1996), *Statistics*, **28**, 35–42.
66. Minimizing Some Cost Functions Related to Both Burn-In and Field Use (1996), *Operations Research*, **44**, 497–500.
67. Confidence Interval for the Mean of the Exponential Distribution Based on Grouped Data (1996), *IEEE Transactions on Reliability*, **45**, 671–677 (with Z. Chen).
68. Limiting Behavior of Some Measures of System Availability (1995), *J. Appl. Prob.*, **32**, 482–493.
69. Bathtub Failure Rate and Upside-down Bathtub Mean Residual Life (1995), *IEEE Transactions on Reliability*, **44**, 388–391.
70. Estimation of Nonoccurrence Probability in a Periodic Environment (1995), *Commun. Statist.–Theory Meth.*, **24**, No.6, 1493–1505, (with L. Chen).
71. Estimation in Discrete Failure Rate Model with a Change Point (1994), *Naval Research Logistics: An International Journal*, **41**, 537–543.
72. Burn-In and Maintenance Policies (1994), *Adv. Appl. Prob.*, **26**, 207–221.
73. Some Results on Burn-In (1994), *Statistica Sinica*, **4**, 525–533 (with H. Block and T. Savits).
74. Maximization of a Survival Probability and Its Application (1994), *J. Appl. Prob.*, **31**, 1026–1033.

75. Estimation Related to Mean Residual Life (1994), *Nonparametric Statistics*, **4**, 179–190.
76. A comparison of the Bonferroni and Scheffé bounds (1993), *Journal of Statistical Planning and Inference*, **36**, 101–105 (with A. Sampson).
77. Burn-in and Mixed Populations (1993), *J. Appl. Prob.*, **30**, 692–702 (with H. Block and T. Savits).
78. Discrete Bathtub Failure Rate and Upside-Down Bathtub Mean Residual Life (1993), *Naval Research Logistics: An International Journal*, **40**, 361–371.
79. A New Model for Failure Data Analysis (1992), *Proceedings of the IASTED International Conference*, 195–197.
80. An analysis of the effects of jitter in data acquisition on synchronous averaging (1991), *IEEE Transactions on Systems, Man and Cybernetics*, **21**, 456–463 (with M. Sun, D. L. Bonaddio and R. J. Scلابassi).
81. Interval Estimation of Availability of a Series System (1991), *IEEE Transactions on Reliability*, **40**, 541–546.
82. Asymptotic results for the Koziol-Green model (1990), *Commun. Statist.–Theory Meth.*, **8**, 2767–2779.
83. Notes on the MLE of correlation coefficients in meta analysis (1990), *Commun. Statist.–Theory Meth.*, **6**, 2035–2052.
84. Some limit properties of excess life (1987), *Journal Of Applied Sciences*, **5**, 301–307.
85. Notes on fitting probability density functions in reliability engineering (1985), *Journal Of Applied Sciences*, **3**, 300–305 (with Weimin Fan).
86. Properties of failure number $N(t)$ in the case of varied life distributions (1985), *Journal Of Engineering Mathematics*, **1**, 61–70.
87. A Kalman type filter for discrete-time distributed parameter system (1984), *Journal Of Jiao Tong University*, **6**, 133–136.
88. Convergence properties of optimal controls in LQ problems (1983), *Journal Of Shanghai Jiao Tong University*, **2**, 133–147.
89. A stochastic differential equation with a square integrable martingale as noise and its control problem (1982), *Journal Of Shanghai Jiao Tong University*, **1**, 19–35.

90. Comparison of two different definitions about the conjugate points of extremal (1979), *Journal Of Shanghai Jiao Tong University*, **3**, 192–197.
91. An extension of the simplest problem in the theory of variation (1979) *Journal Of Shanghai Jiao Tong University*, **3**, 182–189.

Other Research Activities

- 5 Contributed Presentations in conferences
- 22 Invited Presentations in international conferences

PROFESSIONAL SERVICE

- **2001-present** Associate Editor of *Communication in Statistics–Theory and Methods*
- **2001-present** Associate Editor of *Communication in Statistics–Simulation and Computation*
- **2002-present** Reviewer for *Mathematical Review*
- **1991-present** Reviewer of more than 100 papers for various statistical journals