CURRICULUM VITAE
January 2025

NAME: Pinyuen Chen

WORK ADDRESS:
Department of Mathematics, 215 Carnegie Building, Syracuse University, Syracuse, New York 13244-1150. (315) 443-1577.

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EDUCATION:
Ph.D., Statistics, University of California, Santa Barbara, 1982
Dissertation: "An Alternative Definition of A Correct Selection in Ranking and Selection Problems" under the guidance of Milton Sobel
M.S., Mathematics, University of Miami, Florida, 1978
B.S., Mathematics, Cheng-Kung University, Taiwan, 1973

PROFESSIONAL EMPLOYMENT:
1982-1987: Assistant Professor, Department of Mathematics, Syracuse University.
1987-1994: Associate Professor, Department of Mathematics, Syracuse University.
1994 - present: Professor, Department of Mathematics, Syracuse University.
1995 - 2006: Director, Interdisciplinary Statistics Program, College of Arts and Science, Syracuse University.
2009- 2016: Acting Director, Interdisciplinary Statistics Program, College of Arts and Science, Syracuse University.
2016- present: Director, Interdisciplinary Statistics Program, College of Arts and Science, Syracuse University.

PROFESSIONAL SERVICE:
- Served in the Syracuse Chapter of the American Statistical Association at the following positions:

1995-1996: Program Chair
1996-1997: Chapter President
1997-1998: Executive Committee Member 2000-2002: Chapter Representative
2004: Executive Committee Member 2005-present: Chapter Representative

- Serving on the editorial board of the journal *Sequential Analysis* since 2004.
- Served on the editorial board of the journal *Statistics and Decision* from 1983 to 2002.

RESEARCH INTERESTS:
Statistical Signal Processing, Ranking and Selection, Multivariate Analysis, Dirichlet Integrals, Multinomial Selection.

GRANTS AND FELLOWSHIPS:
2023 April Travel Award, China Exchange Program, American Mathematical Society.
2012 July - 2014 June, AFOSR Grant: Nonparametric Multivariate Detection Among Heterogeneous Data.

2009 - 2012 National Research Council/AFOSR Grant: Statistical Nonhomogeneity Detector For Multiple Targets
6/8/05 - 6/7/08 Air Force Research Laboratory Grant: Statistical Selection Theory Applied to Multiple Target Detection.
1/27/03 - 8/23/04 Air Force Research Laboratory Grant: Statistical Estimation in MUSIC (MUltiple SIgnal Classification)
8/24/01 - 8/23/02 Air Force Research Laboratory Grant: Statistical Inferences on the Number of Signals.
10/1/99 - 8/23/01 Air Force Research Laboratory Grant: Selection Theory in Radar Signal Processing.
5/8/98 - 8/23/99 Air Force Research Laboratory Grant: Selection Theory in Radar Signal Processing.
1/1/97 - 12/31/97 Air Force Research Laboratory Grant: Selection Theory in Radar Signal Processing.
Summer, 1995 Summer research fellow, Signal Processing Branch (OCSS), US Air Force Griffiss Air Force Base, NY
Summer, 1994 Summer research fellow, Signal Processing Branch (OCST), US Air Force Griffiss Air Force Base, NY.
1/93 - 12/93 Air Force Office of Scientific Research: Research Initiation Grant.
Summer, 1992 Summer research fellow, Image Processing Branch (IRRE), US Air Force Griffiss Air Force Base.
Summer 1990 Summer research fellow, US Air Force Human Resources Laboratory, Brooks Air Force Base, TX.
9/86 - 12/86 Visiting Fellow, Mathematical Research Institute, Cornell University.

PUBLICATIONS IN REFEREED JOURNALS AND BOOKS:

1. (with Milton Sobel) SELECTING THE t BEST CELLS OF A MULTINOMIAL USING INVERSE SAMPLING (1984), *Inequalities in Statistics and Probability* (edited by Y. L. Tong), The Institute of Mathematical Statistics, 206-210.

2. (with Milton Sobel) SELECTING AMONG MULTINOMIAL CELLS USING INVERSE SAMPLING-A GENERALIZED GOAL (1984), *Statistics and Decisions*, Supplement Issue No. 1, 285-295.

3. SUBSET SELECTION FOR THE LEAST PROBABLE MULTINOMIAL CELL (1985), *Ann. Inst. Statist, Math.* 37, Part A, 303-314.

4. (with Milton Sobel) ON A NEW CRITERION FOR SELECTING THE MOST PROBABLE CELL IN A MULTINOMIAL DISTRIBUTION (1985)*, The frontiers of Modern Statistical Inference Procedures I, Proceedings and Discussions of the IPASPA'S Conference* (edited by E. J. Dudewicz), American Sciences Press, Inc., 215-236.

5. ON THE LEAST FAVORABLE CONFIGURATION IN MULTINOMIAL SELECTION PROBLEM (1986), *Commun. Statist. - Theor. Meth.* 15(2), 367- 385.

6. INVERSE SAMPLING SUBSET SELECTION FOR MULTINOMIAL DISTRIBUTION (1986), *American Journal of Mathematical and Management Sciences*, Vol. 6, Nos. 1 and 2, 41 - 64.

7. (with Milton Sobel) AN INTEGRATED FORMULATION FOR SELECTING THE t BEST OF k NORMAL POPULATION (1987), *Commun. Statist-Theor. Meth.*, 16(1)121-146.

8. COMPARISON OF MULTINOMIAL CELLS WITH A CONTROL (1987), *Statistics and Decisions*, Vol. 5, No. 1/2, 33-46.

9. THE K-IN-A-ROW PROCEDURE IN SELECTION THEORY (1987), *Ann. Inst. Statist. Math.* 39, part A, 325-330.

10. (with Milton Sobel) AN INTEGRATED FORMULATION FOR THE MULTINOMIAL SELECTION PROBLEM (1987), *Commun. Statist. - Theor. Meth.*, 16(1), 147-180.

11. (with L. Hsu and Milton Sobel) ENTROPY BASED OPTIMAL GROUP TESTING PROCEDURES (1987). *Probability in Engineering and Informational Sciences*, 1, 497- 509.

12. (with Marc Sobel and Milton Sobel) SELECTION PROBLEM FOR A MODIFIED MULTINOMIAL (VOTING) MODEL (1988). *Statistical Decision Theory and Related Topics IV* (Ed. Gupta and Berger), Vol. 2, Springer-Verlag, New York, 23-32.

13. AN INTEGRATED FORMULATION FOR MULTINOMIAL SELECTION PROBLEMS. (1988) *Annals of the Institute of Statistical Mathematics*, Vol. 40, No. 3, 615-625.

14. SELECTING THE BEST MULTINOMIAL CELL-PROVIDED IT IS BETTER THAN A CONTROL (1988) *Biometrical Journal,* 30(8), 985-992.

15. CLOSED INVERSE SAMPLING PROCEDURE FOR SELECTING THE LARGEST MULTINOMIAL CELL PROBABILITY (1988) *Communications in Statistics, Simulation and Computation*, 17(3), 969-994.

16. TRUNCATED INVERSE SAMPLING PROCEDURE FOR MULTINOMIAL SUBSET SELECTION. (1989), *Sankhya, Indian Statistical Institute*, 13, 51 (2), 158-183.

17. (with R.E. Bechhofer) A NOTE ON A CURTAILED SEQUENTIAL PROCEDURE FOR SUBSET SELECTION OF MULTINOMIAL CELLS. (1991) A*merican Journal of Mathematical and Management Sciences*, Vol. 11, Nos. 3 & 4, 309-324.

18. (with L. Hsu) A COMPOSITE STOPPING RULE FOR MULTINOMIAL SUBSET SELECTION (1991) *British Journal of Mathematical and Statistical Psychology,* 44, 403-411.

19. (with L. Hsu) ON A SEQUENTIAL SUBSET SELECTION PROCEDURE FOR THE LEAST PROBABLE MULTINOMIAL CELL (1991). *Communications in Statistics, Theory and Methods*, 20, 9, 2845-2862.

20. (with L. Hsu) PARTITIONING MULTINOMIAL CELLS (1992), *The Frontiers of Modern Statistical Inference Procedures, Vol. II* (edited by E. Bofinger, E. J. Dudewicz, G. J. Lewis, and K. Mengersen), American Sciences Press, Inc., 239-254.

21. (with Marc Sobel, and Milton Sobel) A CONDITIONAL ANALYSIS FOR A TWO STAGE SELECTION PROCEDURE FOR SELECTING THE BEST MEAN. (1991) *American Journal of Mathematical and Management Sciences,* Vol. 11, Nos. 3 & 4, 325-350.

22. (with L. Hsu) A TWO STAGE DESIGN FOR COMPARING CLINICAL TRIALS (1992). *Biometrical Journal,* 34 (1), 29-35.

23. TRUNCATED SELECTION PROCEDURES FOR THE MOST PROBABLE EVENT AND THE LEAST PROBABLE EVENT (1992). *Annals of the Institute of Statistical Mathematics,* vol. 44, no. 4, 613-622.

24. (with Milton Sobel) AN OPTIMAL STOPPING RULE FOR MULTINOMIAL INVERSE SAMPLING PROBLEMS (1993) *Multiple Comparisons, Selection and Biometry: a festschrift in honor of Charles W. Dunnett* (edited by F. Hoppe), Mercel Dekker, Inc., 531-548.

25. (with S. Panchapakesan and Milton Sobel) SELECTING AMONG THE MULTINOMIAL LOSERS (1994), *Sequential Analysis*, 13, 3, 177-200.

26. ON CHOOSING AMONG SEVERAL EXPERIMENTAL TREATMENTS AND A CONTROL (1994*), Biometrical Journal*, 36, 6, 709-718.

27. (with L. Hsu) SELECTING THE BEST POPULATION, PROVIDED IT IS BETTER THAN A CONTROL: THE UNEQUAL VARIANCES CASE (1996), *Bimetrical Journal,* 38, 4, 425-432.

28. (with J. Zhang) AN INTEGRATED FORMULATION FOR SELECTING THE BEST NORMAL POPULATION: THE COMMON AND UNKNOWN VARIANCE CASE (1997), *Communications in Statistics, Theory and Methods*. Vol. 26, #11, 2701 - 2704.

29. (with M. Aoshima) ON A TWO-STAGE PROCEDURE FOR SELECTING THE LARGEST MULTINOMIAL CELL PROBABILITY (1999*), Sequential Analysis*, 18(2), 143-155.

30. (with Melvin, W. L. and Wicks, M. C.) SCREENING AMONG MULTIVARIATE NORML DATA (1999), *Journal of Multivariate Analysis*, 69, 10-29.

31. (with Wicks, M. C.) A SIMULATION STUDY OF A SELECTION PROCEDURE IN A RADAR SIGNAL PROCESSING WITH AN APPLICATION IN MEDICAL IMAGING. (2000) *Biometrical Journal*, 42, 1, 119-128.

32. A SELECTION PROCEDURE PRIOR TO SIGNAL DETECTION. (2000), in *Advances on Theoretical and Methodological Aspects of Probability and Statistics* (edited by N. Balakrishnan), Gordon and Breach Science Publishers, 391-398.

33. (with Wicks, M. C. and Adve, R. S.) DEVELOPMENT OF A PROCEDURE FOR DETECTING THE NUMBER OF SIGNAL IN A RADAR MEASUREMENT (2001), *IEE Proceedings Radar, Sonar Navig.,* vol. 148, no. 4, 219-226.

34. A SELECTION PROCEDURE FOR ESTIMATING THE NUMBER OF SIGNAL COMPONENTS (2002), *Journal of Statistical Planning and Inference,* v. 105, issue 2, 299-311.

35. (with J. Zhang) AN INTEGRATED FORMULATION FOR SELECTING THE BEST NORMAL POPULATION: THE UNEQUAL AND UNKNOWN VARIANCE CASE (2002), *The Journal of Applied Mathematics and Decision Sciences.* Vol. 6, no. 1, 23-42.

36. (with Wicks, M. C.) Development of a lower confidence limit for the number of signals (2003). *IEEE Transactions on Signal Processing,* Vol. 51, no. 6, 1449-1456.

37. (with Aoshima, M. and Panchapakesan, S.) Sequential Procedure for Selecting the Most Probable Multinomial Cell When a Nuisance Cell is Present (2003), *Communications in Statistics, Theory and Methods,* V. 32, Issue 4, 893-906.

38. Estimating the upper limit of the number of signals (2003), *Signal Processing,* Vol. 83, no. 10, 2265-2277.

39. (with Rollin, L.) A Two-Stage Selection and Testing Design for Comparing Several Normal Means with a Standard (2003), *Sequential Analysis,* v. 22, no. 4, 287 - 305.

40. (with Rollin, L.) A Two-Stage Selection and Testing Design for Comparing Several Normal Means with a Standard when the variances are unknown (2004). *Sequential Analysis,* Vol. 23, no. 1, 75 -101.

41. (with Panchapakesan, S.) Detecting Multiple Targets Simultaneously at k Sites (2004). *Communications in Statistics, Theory & Methods,* Vol. 33, no. 7, 1667 - 1688.

42. (with Zhang, J. and Fang, Y.) A Two-Stage Procedure on Camparing Several Experimental Treatments and a Control (2005). *The Journal of Applied Mathematics and Decision Sciences.* (2005) 1, 47-58.

43. (with Rollin, L.) A Two-Stage Design for Choosing Among Experimental Treatments in Clinical Trials (2005). In *Advances in Ranking and Selection, Multiple Comparisons, and Reliability, a special volume in honor of S. Panchapakesan*. (Edited by N. Balakrishnan, N. Kannan, & H. N. Nagaraja), 385-409, Birkhauser.

44. (with Buzaianu, E. M.) On Selecting Among Treatments With Binomial Outcomes (2005). *Communications in Statistics, Theory and Methods.* Vol. 34, Number 6, 1247- 1264.

45. An Interval Estimation for the Number of Signals (2005). *Signal Processing,* v. 85, 1623-1633.

46. (with John, T.) Log-normal Selection with Applications to Lifetime Data (2006). *IEEE Transactions on Reliability,* Vol. 55, Number 1, 135-148.

47. (with Panchapakesan, S.) Signal processing, Selection Theory In. (2005). In *Encyclopedia in Statistics,* 2nd edition, Volume 12, 7711-7716, Wiley, New York.

48. A Confidence Interval for the Number of Principal Components (2006). *Journal of Statistical Planning and Inferences.* 136, 2630-2639.

49. (with John, T.) Log-normal selection using type-II censored samples - unknown variance case (2006). *Sequential Analysis* v. 25, no. 2, 151-166.

50. (with Markow, J. and Wicks, M.) Building a Confidence Interval for the Number of Signals in Noise using Likelihood Ratio Test Statistics (2008). *IET Radar, Sonar & Navigation*, Volume 2, Issue 2, 111-120.

51. (with Buzaianu, E. M.) Curtailment Procedure for Selecting Among Bernoulli Populations (2008). *Communications in Statistics, Theory & Methods.* 37, 1085-1102.

52. (with Yan, Y. and Osadciw, L. A.) Confidence Interval of Feature Number Selection for Face Recognition (2008). *Journal of Electronic Imaging*, Volume 17, 011002.

53. (with Wu, T. J. and Yang, J.) A Comparative Study of Model Selection Criteria for the Number of Signals (2008). *IET Radar, Sonar & Navigation*, Volume 2, Issue 3, 180- 188.

54. (with Cai, W.) Screening for multiple target detection (2008). *Communications in Statistics, Theory and Methods*, 37, 1930-1947.

55. (with John, Tom) L1 Limit of Trimmed Sum of Order Statistics From Location-Scale Distributions with Applications to Type-II Censored Data Analysis (2008), *Communications in Statistics, Theory & Methods*, 37, 2488-2905.

56. (with Wu, Ling-Ling and Chuang, Ya-Lan) Motivation to Use Search Engine: A Two Factor Model (2008). *The Journal of American Society of Information Science and Technology,* 59(11), 1829-1840.

57. (with Buzaianu, E. M.) A Hybrid Selection and Testing Procedure with Curtailment (2009), *Sequential Analysis*, Vol. 28, Number 1, 2-20.

58. (with Buzaianu, E. M.) Authors' Responses (2009), *Sequential Analysis*, Vol. 28, Number 1, 2-20. 48-53.

59. (with Cai, Weixing) Partitioning k Multivariate Normal Populations according to Equivalence with Respect to a Standard Vector (2009), *Journal of Statistical Planning and Inference,* 139, 2227 â€“ 2234.

60. (with Hsu, Lifang) A Selection Procedure for the Number of Signals in Presence of Colored Noise (2009), Communications in Statistics, *Theory and Methods*, 38, 1741â€“1757, 2009.

61. (with Buzaianu, E. M.) Partitioning Bernoulli Populations with Respect to a control (2009), *Communications in Statistics, Theory and Methods.*38, 2769-2783.

62. (with Osadciw, L. and Wu, T. J.) Multiple targets characterization of electromagnetic vulnerability (2010), *Signal Processing,* 90 (1): 344-351.

63. (with Buzaianu, E. M. and Wu, T-J) Subset Selection Procedures to Identify EM Fields Following Log-normal Distributions (2011), *IET Radar, Sonar & Navigation,*Vol. 5, Iss. 4, 458-465.

64. (with S. Panchapakesan) Discussion on "Two-Stage Procedures for High- Dimensional Data" by Makoto Aoshima and Kazuyoshi Yata (2011), *Sequential Analysis*, Vol. 30, Number 4, 412-415.

65. (with Wu, Tiee-Jian and Yan, Yanjun) The weighted average information criterion for multivariate regression model selection (2013), *Signal Processing*, Vol. 93, Issue 1, 49-55.

66. (with Hsu, Lifang and S. Panchapakesan) A Restricted Subset Selection Rule for Selecting At Least One of the t Best Normal Populations in Terms of Their Means When Their Variance is Known, *Communications in Statistics* (2014), *Theory and Methods*, Volume 43, Issues 10-12, 2250-2259.

67. Buzaianu, Elena and Chen, P. (2014) Selection among Bernoulli Populations with Uniformly Distributed Sample Sizes, *American Journal of Mathematical and Management Sciences*, 33:3, 176-19.

68. Buzaianu, E. and Chen, P. (2015) A Stein-Type Two Sample Procedure for Comparing Normal Means, *Sequential Analysis*, Vol. 34, Issue 4, 441-460.

69. Carsten, C. and Chen, P. (2016) Curtailed Two-Stage Matched Pairs Design in Double-Arm Phase II Clinical Trials, *Journal of Biopharmaceutical Statistics,* 26:5, 816-822. (DOI: 10.1080/10543406.2015.1074921)

70. Buzaianu, E., Chen, P., and Panchapakesan, S. (2017) Selecting the Normal Population with the Smallest Variance: A Restricted Subset Selection Rule, *Communications in Statistics, Theory and Methods.* 46:16, 7887-7901. DOI:10.1080/03610926.2016.1165849

71. Buzaianu, E. and Chen, P. (2018) A Two-Stage Design for Comparative Clinical Trials: the Heteroscedastic Solution, *Sankhya* B, Volume 80, Issue 1, Page 151-177. DOI: 10.1007/s13571-017-0147-9.

72. Chen, P. and Hsu, L. (2021) A Curtailed Selection Procedure for Comparing Bernoulli Outcomes With a Control. *Journal of Biopharmaceutical Statistics*, Volume 31, Issue 1, 14-24. https://www.tandfonline.com/doi/full/10.1080/10543406.2020.1765369

73. Buzaianu, E., Chen, P., and Hsu, L. (2022) A Curtailed Procedure for Selecting Among Treatments With Two Bernoulli Endpoints, *Sankhya B*, 84, 320-339. DOI: 10.1007/s13571-021-00261-2

74. Buzaianu, E., Chen, P., and Hsu, L. (2023) A Restricted Subset Selection Procedure for Selecting the Largest Normal Mean Under Heteroscedasticity, *Sequential Analysis,* Volume 42, Issue 1, 56-69.

75. Buzaianu, E., Chen, P., and Hsu, L. (2024) Selecting Among Treatments with Two Bernoulli Outcomes, *Communications in Statistics, Theory & Methods,* Volume 53, No. 6, 1964-1084.

76. Yin, C., Buzaianu, E., Chen, P., and Hsu, L. (2024) A Design for Selecting Among k Treatments with Two Binary Endpoints in Comparison to a Control Treatment. Submitted.

77. Zhang, Y. and Chen, P. (2024) Curtailed Procedures for Binomial Random-sized Subset Selection. Submitted.

PUBLICATIONS IN CONFERENCE PROCEEDINGS: (Many of them are more significant than journal articles.)

1. ON SELECTING THE BEST OF k SYSTEMS: AN EXPOSITORY SURVEY OF SUBSET-SELECTION MULTINOMIAL PROCEDURES (1988). *1988 Winter Simulation Conference Proceedings* (edited by M. A. Abrams, P. L. Haigh, and J. C. Comfort), 440-444.

2. (with S. Panchapakesan) AN INTEGRATED FORMULATION FOR SELECTING THE BEST NORMAL POPULATION AND ELIMINATING BAD ONES (1994), *Proceedings of the 11th Computational Statistics Symposium*, Vienna, Austria (edited by R. Dutter and W. Grossmann), 18-19.

3. (with Ji, Yuanqing) AN INTEGRATED NONPARAMETRIC PROCEDURE FOR SELECTING THE BEST POPULATION (1994), *Proceedings of the 3rd Schwerin Conference On Mathematical Statistics*, (edited by Herrendorfer, G. and Miescke, K. J.), Dummerstorf, Germany, 1-11.

4. (with M. Sobel) PARTITIONING MULTINOMIAL CELLS USING INVERSE SAMPLING (1995), *Bulletin of The International Statistical Institute, Contributed papers, 50th session,* 181-182.

5. (with M. C. Wicks and W. L. Melvin) AN EFFICIENT ARCHITECTURE FOR NONHOMOGENEITY DETECTION IN SPACE-TIME ADAPTIVE PROCESSING AIRBORNE EARLY WARNING RADAR (1997), *Proceedings of the 1997 International Radar Conference,* October 1997, Edinburgh, UK, Publication Number 449, 295-299.

6. (with W. L. Melvin and M. C. Wicks) SAMPLE SELECTION FOR IMPROVED ADPTIVE AIRBORNE RADAR*, Proceedings of the Fifth Adaptive Sensor Array Processing (ASAP-5) Workshop (March 12-14, 1997)*, (edited by G. M. Oâ€™Donovan), MIT Lincoln Laboratory, 193-216.

7. (with Melvin, W. L. and Wicks, M. C.) PARTITIONING PROCEDURE IN RADAR SIGNAL PROCESSING PROBLEMS, *American Statistical Association 1997 Proceedings of the Section on Physical & Engineering Sciences*, 105-110.

8. (with Wicks, M. C.) STATISTICAL REGNITION OF NON-HOMOGENEOUS COVARIANCE STRUCTURES (1999), *Proceedings of the 33rd Annual Conference on Information Sciences and Systems* (edited by J. L. Prince and T. D. Tran), The Johns Hopkins University, 69-74.

9. (with Wicks, M. C.) A PROCEDURE FOR DETECTING THE NUMBER OF SIGNAL COMPONENTS IN A RADAR MEASUREMENT (2000), *Proceedings of the IEEE International Radar Conference,* Arlington, Virginia, IEEE Aerospace and Electronic Systems Society, 451-456.

10. (with Wicks, M. C.) RANKING AND SELECTION FOR TRAINING DATA SELECTION IN MULTI-CHANNEL RADAR (2000), *Proceedings of the 2000 Antenna Applications Symposium,* Allerton Park, Monticello, Illinois, 23-28.

11. (with Zhang, S., Cushman, T., Wicks, M. C.) A MULTI-STEP SELECTION PROCEDURE FOR ESTIMATING THE NUMBER OF SIGNAL COMPONENTS (2001), *Proceedings of 2001 IEEE Radar Conference,* Atlanta, Georgia, Sponsored by IEEE Aerospace and Electronic Systems Society, 129-134.

12. (with Wicks, M. C.) RANKING AND SELECTION APPLIED TO EIGEN-ANALYSIS OF ARRAY (2001), *Proceedings of the 2001 Antenna Applications Symposium,* Allerton Park, Monticello, Illinois, 464-476.

13. (with Wick, M. C.) A LOWER CONFIDENCE LIMIT FOR THE NUMBER OF SIGNALS (2002), *Proceedings of the 2002 IEEE Radar Conference,* Long Beach, California, Sponsored by IEEE Aerospace and Electronic Systems Society. In a CD.

14. (with Rangaswamy, M., Michels, J., and Himed, B.) A comparison of two non-homogeneity detection methods for space-time adaptive processing. *Proceedings of the Second IEEE Sensor Array and Multichannel Signal Processing Workshop*, August 4-6, 2002, Rosslyn, Virginia, 355-359.

15. (with Wicks, M. C.) A CONFIDENCE INTERVAL ESTIMATION FOR THE NUMBER OF SIGNALS, *Proceedings of RADAR 2002, IEE Publication 490,* Edinburgh International Conference Centre, UK, 15-17 October 2002, 344-348.

16. (with Wicks, M. C. and Genello, G.) Estimating the number of signals in presence of colored noise, Proceedings of 2004 IEEE Radar Conference, Philadelphia, PA, April 26-28.

17. (with Markow, J. and Wicks, M.) A Likelihood Ratio Test Based Interval Estimate of the Number of Signals Present in a Measurementâ€ *Proceedings of 2006 IEEE Radar Conference,* Verona, NY, April 27.

Technical Reports:

* (with L. T. Bernhofen) A comparative analysis of a 4-group and 6-group job classification, 1990 AFOSR Summer Faculty Research Final Report, v. 4, #131, 1-20.

* Statistical Comparison of Several automatic target recognition (ATR) systems, Final Report, 1992 AFOSR Summer Faculty Research Program.

* On testing the equality of covariance matrices under singularity, Final Report, 1994 AFOSR Summer Faculty Research Program.

* Partitioning Procedure in Radar Signal Processing Problems, Final Report, 1995 AFOSR Summer Faculty Research Program.

PATENT DISCLOSURE:

(with W. Melvin and M. Wicks) Nonhomogeneity detection method and apparatus for improved adaptive signal processing, USA Patent Number 5706013, January, 6, 1998.

Ph. D. STUDENTS AND THEIR DISSERTATION TITLES:

Laura T. Bernhofen (1994) Procedures for selecting the best experimental treatment with comparison to a control.

Jun-Lue Zhang (1995) A integrated approach to some ranking and selection problems.

Linda Rollin (2002) Two-stage selection and testing designs for comparing normal means with a standard.

Thomas John (2004) Lognormal Selection with Applications to Lifetime Data.

Elena Mihaela Buzaianu (2006) Selection Procedures for Binomial Populations.

Weixing Cai (2008) Multiple decision rules for equivalence among k populations and their applications in signal processing, clinical trials, and classification.

Jeremy Entner (2013) Methods of Nonparametric Multivariate Ranking and Selection.

BOOK:
(with Edward J. Dudewicz, and Baldeo K. Taneja) *Modern Elementary Probability and Statistics*, American Sciences Press, 1990.

BOOK REVIEWED:
MULTI-STAGE SELECTION AND RANKING PROCEDURES:SECOND ORDER ASYMTOTICS by N. Mukhopadhyay and T. K. Solanky, Wiley, NY. In *The Journal of American Statistical Association (1995)*, vol. 90, #431, 1130-1131.

ADVANCES IN STATISTICAL DECISION THEORY AND *APPLICATIONS* by S. Panchapakesan and N. Balakrishnan, Birkhauser, Boston 1997. In *The Journal of American Statistical Association (1998)*, vol. 93, #443, 1239-1240.

NON-TECHNICAL PUBLICATION:
(with the members of the New Researchersâ€™ Committee of The Institute of Mathematical Statistics) (1991) Meeting the needs of new statistical researchers, *Statistical Science*, v. 6, #2, 163-174.

PRESENTATIONS:
* August 11, 1993, The Joint Statistics Annual Meetings, San Francisco, CA., presented a 20-minute selected paper "On Comparing Automatic Target Recognition Systems".

* September 6, 1993, The 3rd Schwerin Conference on mathematical statistics, Bad Doberon, Germany, presented an invited talk "An integrated nonparametric procedure for selecting the best population".

* April 27, 1994, The TIMS/ORSA Joint National Meeting, Boston, MA., presented an invited paper "Statistical Comparison of Several Automatic Target Recognition Systems".

* May 19, 1994, Statistics Seminar, Department of Statistics, Cheng-Kung University, Tainan, Taiwan, presented an invited talk on "An Integrated nonparametric procedure for selecting the best population".

* August 19, 1994, Statistics Seminar, Institute of Statistics, Ulm University, Ulm, Germany, presented an invited talk on "An Integrated nonparametric procedure for selecting the best population".

* August 23, 1994, The 11th Symposium on Computational Statistics, Vienna, Austria, presented a talk on "An Integrated Formulation For Selecting The Best Normal Population And Eliminating Bad Ones".

* August 24, 1995, The 50th session of the International Statistics Institute, Beijing, China, presented an invited paper "Partitioning Multinomial Cells Using Inverse Sampling".

* August 29-30, 1995, The Department of Mathematics, The Beijing Normal University, Beijing, China, gave three one-hour lectures on "Ranking and selection Theory and its Applications".

* July 15, 1996, The First Statistics Conference of Two Sides of Straits & The Fifth South Taiwan Statistics Conference, Taiwan, presented a talk on "On selecting among the multinomial cells".

* May 16, 1997, Department of Mathematics and informatics, Tokyo Gakugei University, Tokyo, gave an invited talk "Multinomial Selection Problems".

* May 21, 1997, International Symposium on Contemporary Multivariate Analysis and its applications, Hong Kong, presented the paper "On Selecting Among the Multinomial Cells".

* August 12, 1997, Joint Statistical Meetings, Anaheim, CA., presented in poster session "Partitioning Procedure in Radar Signal Processing Problems".

* November 4, 1997, School of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, GA., gave a seminar talk on "Some Statistical Aspects of Radar Signal Processing".

* February 26, 1998, Department of Mathematics, Syracuse University, gave a Mathematics Graduate Organization colloquium on "Some Statistical Aspects of Radar Signal Processing".

* August 25, 1998, XIII Symposium on Computational Statistics, Bristol, England, presented a paper "A Simulation Study of A Partitioning Procedure for Radar Signal Processing".

* October 11, 1998, International Indian Statistical Association Conference 1998, McMaster University, Canada, presented a talk "Some Statistical Aspects of Radar Signal Processing".

* December 12, 1998, 7th International Matrix and Statistics Workshop, Nova Southeastern University, Ft. Lauderdale, Florida, presented a talk "On Comparing Two Covariance Matrices".

* December 17, 1998, Working group on Correlated Data, Dept. of Mathematics, Syracuse University, gave a lecture on "Handling Unknown Covariance Matrix In Radar Signal Processing."

* March 17, 1999, The 33rd Annual Conference on Information Sciences and Systems, Johns Hopkins University, Baltimore, Maryland, presented a paper "Statistical Regognition of Non-homogeneous Covariance Structure."

* May 19, 1999, International Conference on Radar Systems, Brest, France, presented a paper "Radar Signal Detection Following Non-homogeneous Data Screening."

* August 11, 1999, The 52nd Session of the International Statistical Institute, Helsinki, Finland, presented a paper "Statistical Screening among Signal Processing Data."

* December 19, 1999, Sixth International Conference of the Forum for Interdisciplinary Mathematics, Mobile, Alabama, presented an invited paper "Screening Among Multivariate Normal Data for Radar Signal Processing."

* March 17, 2000, Statistics: Reflections on the past and visions for the future, An international conference in honor of Professor C. R. Rao, San Antonio, TX, presented an invited paper "Preprocessing Unknown Unequal Covariance Matrices for Signal Detection."

* April 20, 2000, Department of Biostatistics Colloquium, Columbia University, New York, NY. presented an invited colloquium "Some Statistical Aspects of Signal Processing."

* May 10, 2000, IEEE 2000 International Radar Conference, Alexandria, Virginia, presented an invited talk "A Procedure for detecting the number of signal components in a radar measurement."

* July 6, 2000, Radio Science and Engineering Division, Stanford Research Institute, Palo Alto, CA, presented an invited talk "Some Statistical Aspects of Signal Processing."

* July 10, 2000, Department of Electrical and Computing Engineering Colloquium, University of California, Santa Barbara, presented an invited colloquium "Some Statistical Aspects of Signal Processing."

* August 13, 2000, National Key Lab of Radar Signal Processing at Xidian University, Xian, China, presented an invited colloquium "Some Statistical Aspects of Signal Processing."

* August 17, 2000, Department of Electrical Engineering, Beijing Institute of Technology, Beijing, China, presented an invited colloquium "Ranking and Selection for Training Data Selection in Multi-Channel Radar."

* September 20, 2000, Antenna Applications Symposium, Park Monticello, Illinois, presented an invited paper "Ranking and Selection for Training Data Selection in Multi-Channel Radar."

* July 7, 2001, Statistics 2001 Canada, Montreal, Canada, presented a contributed paper "A Selection Procedure for Estimating the Multiplicity of the Smallest Eigenvalue."

* August 6, 2001, Joint Statistical Meetings, Atlanta, Georgia, presented a contributed paper "On Detecting the Number of Signal Components."

* August 13, 2001, Academia Sinica, Taipei, presented an invited colloquium "Some Statistical Aspects of Signal Processing."

* August 19, 2001, The fifth ICSA International Conference, Hong Kong, presented a paper "On Estimating the Number of the Smallest Eigenvalues."

* October 17, 2001, Department of Mathematics and Statistics, McMaster University, presented an invited seminar "A Multi-step Selection Procedure for Estimating the Number of Signals."

* October 18, 2001, Department of Statistics, University of Toronto, presented an invited seminar "Some Statistical Aspects of Signal Processing."

* October 30, 2001, Antenna Applications Symposium, Park Monticello, Illinois, presented an invited paper "Ranking and Selection Applied to Eigen-Analysis of Array."

* December 5, 2001, Department of Biostatistics, University of Rochester, presented an invited colloquium "Ranking and Selection Applied to Signal Detection."

* April 23, 2002, Department of Statistics and Applied Probability, University of California at Santa Barbara, presented an invited colloquium "Ranking and Selection Applied to Signal Processing."

* April 24, 2002, Department of Mathematics, California State University at Long Beach, presented an invited colloquium "Ranking and Selection Applied to Signal Processing."

* April 24, 2002, IEEE Radar Conference, Long Beach, CA, presented a paper "A Lower Confidence Limit for the Number of Signals."

* June 15, 2002, International Indian Statistical Association Conference, DeKalb, Illinois, presented an invited paper "Detecting multiple targets simultaneously at k sites."

* August 14, 2002, Joint Statistics Meeting, New York, NY, presented a contributed paper "A confidence interval estimation for the number of signals."

* October 16, 2002, IEE Rader Conderence, Edinburgh, UK, presented an invited paper "A confidence interval estimation for the number of signals."

* March 12, 2003, Radar Interferometry Group, Department of Electrical Engineering and Department of Geophysics, Stanford University, presented an invited seminar "Two Problems in Statistical Signal Processing."

* March 13, 2003, Department of Applied Mathematics and Statistics, UC Santa Cruz, presented an invited seminar "Two Problems in Statistical Signal Processing."

* June 19, 2003, Seventh Purdue International Symposium on Statistics, West Lafayette, Indiana, presented an invited paper "An Application of Ranking and Selection Theory in Signal Processing: The Number of Signals."

* August 6, 2003, Joint Statistics Meetings, San Francisco, CA, presented a contributed paper "Estimating the Number of Signals in Presence of Colored Noise."

* October 11, 2003, American Mathematical Society Eastern Sectional Meeting #990, Binghamton, NY, presented an invited talk "On the number of signals."

* November 4, 2003, Department of Statistics, UC at Riverside, CA, presented an invited colloquium "On the number of signals."

* April 28, 2004, IEEE Radar Conference, Philadelphia, PA, presented a contributed paper "Estimating the number of signals in presence of colored noise."

* July 8, 2005, The joint Meeting of the Chinese Society of Probability and Statistics (CSPS) and the Institute of Mathematical Statistics (IMS), Beijing, China, presented a contributed paper "On the number of principal components."

* July 23, 2005, The Mathematics of Medical Imaging Workshop, Atlanta, GA, presented a proposal "Confidence Interval Based PCA applied to fMRI.

* December 21, 2005, National Sun-Yat-Sen University, Taiwan, presented an invited talk “Two Statistical Issues in Signal Processing”.

* December 22, 2005, National Cheng-Kung University, Taiwan, presented an invited “Two Statistical Issues in Signal Processing”

* December 23, 2005, Feng-Chia University, Taiwan, presented an invited talk “On Selecting Treatments with Binomial Outcomes”.

* December 26, 2005, Academic Sinica, Taiwan, presented an invited talk “On the number of Principal Components”.

* December 30, 2005, National Tsing Hua University, Taiwan, presented an invited talk “On the number of Principal Components”.

* March 18, 2006, City University of Hong Kong, presented an invited talk "A Confident Interval for the Number of Principal Components Applied to Financial Data"
* August 8, 2006, presented *Sequential Analysis* Editor’s Invited Paper (50 minutes) “Closed Adaptive Sequential Designs with Applications to Clinical Trials” in the Joint Statistical Meetings held in Seattle, Washington.

* July 4, 2007, presented an invited talk “Statistics in Data Mining” at Data Mining Workshop, Information Management Association, Taipei, Taiwan.

* December 28, 2007, presented an invited talk “On Selecting Among Binomial Populations”, International Conference on Multiple Decision Theory, Statistical Inference and Applications. Taipei, Taiwan.

* July 7, 2008, presented an invited talk “Multi-Step Estimate for the Number of Principal Components” at International Woekshop on Applied Probablity, Compiegne, France.

* April 25, 2009, presented an invited talk “A Hybrid Selection and Testing Procedure with Curtailment for Comparative Clinical Trials” at New England Statistics Symposium 2009 in Storrs, Connecticut.

* June 24, 2009, presented an invited colloquium "A Hybrid Selection and Testing Procedure with Curtailment for Comparative Clinical Trials" in the Department of Statistics, National Cheng Kung University, Tainan, Taiwan.

* December 4, 2009, presented an invited talk "Partitioning Bernoulli Population with respect to a Control" at the conference in honor of Professor Shelley Zacks at SUNY Binghamton.

* July 7, 2010, presented an invited talk "Bernoulli Population with respect to a Control" at The 19th South Taiwan Statistics Conference and 2010 Cross-Strait Conference on Probability and Statistics.

* June 14, 2011, presented an invited talk "Two-Stage Subset Selection Procedure to Identify EM Fields Following Log-normal Distributions" in the third International Workshop in Sequential Methodologies, Stanford University, CA

* June 27, 2011, presented an invited talk "On An Adaptive Procedure for Selecting Among Bernoulli Populations" in the ICSA 20th Applied Statistics Symposium, New York, NY

* August 11, 2011, presented a colloquium talk "Selecting Procedures in Identifying EM Fields Following Log-Normal Distributions" at National Cheng Kung University, Tainan, Taiwan.

* December 27, 2011, presented a 30 minutes invited speech "Multiple Targets Characterization of Electromagnetic Vulnerability" in International Conference on Advances in Probability and Statistics, Theory and Applications, the Chinese University of Hong Kong.

*July 5, 2012, presented a 60 minutes invited speech "Depth Based Nonparametric Multivariate Selection" at National Cheng Kung University, Tainan, Taiwan.

*August 20, 2012, presented a 90 minutes invited speech "Depth Based Nonparametric Multivariate Selection" at Sensors Directorate, Wright Patterson Air Force Base, Ohio.

*May 3, 2013, presented a 90 minutes invited speech "Nonparametric Selection of the Smallest-Dispersion Multivariate Population" in the Department of Finance at National Taiwan University, Taipei, Taiwan

*June 3, 2013, presented a 60 minutes speech "Nonparametric Selection of the Smallest-Dispersion Multivariate Population" in the Institute of Statistics at Academic Sinica, Taiwan.

*September 25, 2014, presented a 90 minutes speech "Two-Sample Procedures for Selecting the Best Normal Mean" in the Department of Statistics at National Cheng-Kung University.

*October 28, 2014, present a 60 minutes seminar "Heteroscedasticity in Selection Theory" in the Department of Mathematics at Syracuse University.

*January 9, 2015, presented a 60 minutes talk "Heteroscedasticity: From Hypothesis Testing to Ranking and Selection" in the Department of Finance at National Taiwan University, Taiwan.

*June 24, 2015, presented a joint invited talk with Elena Buzaianu "A Stein-Type Two-Sample Procedure for Comparing Normal Means" in the 5th International Workshop in Sequential Methodologies, Columbia University, New York. (https://drive.google.com/file/d/0Bwk5T5d8pWKETlcwcnNPREhULWM/view)

*August 25, 2015, presented a 60 minutes colloquium "Curtailed Matched Pairs Two-Stage Testing for Two Bernoulli Success Probabilities" in the Department of Statistics at National Cheng-Kung University, Taiwan.

*June 16, 2016, presented a 60 minutes invited colloquium "A Two-Sample Two-Stage Selection & Testing Design" in the Department of Statistics at National Cheng-Kung University, Taiwan.

*February 10 (Fayetteville–Manlius High School), February 17 (Midlakes High School), March 10 (Brighton High School), April 21 (Archimedes High School), April 29 (South Kent School), 2017, presented 40 minutes lecture on "Inferences for Normal Means --- a Story of three statisticians."

*May 19, 2017, presented a 60 minutes invited colloquium "A Two-Stage Design for Comparative Clinical Trials: the Heteroscedastic Solution" in the Department of Statistics at University of Science and Technology of China, Hefei, China.
*June 22, 2017, presented a 30 minutes invited conference talk "A Curtailed Procedure for Comparing Treatments with Binary Response with a Control" at International Workshop in Sequential Methodologies VI, Rouen, France.

*July 31, 2017, presented (joint work with Mingyue Wang) the poster "A two-stage design for selecting the t best among Bernoulli treatments and a control" at 2017 Joint Statistics Meetings, Baltimore, Maryland.

*August 1, 2017, presented a contributed talk "A Curtailed Procedure for Comparing Treatments with Binary Response with a Control" at 2017 Joint Statistics Meetings, Baltimore, Maryland.

*January 4, 2018, presented an invited colloquium: "An Integrated Formulation for Comparing Bernoulli Treatments With a Control" at National Cheng-Kung University.

*January 10, 2018, presented an invited colloquium: "A Two-Stage Design for Comparative Clinical Trials: the Heteroscedastic Solution" at National University of Singapore.

*January 12, 2018, presented an invited colloquium: "A Two-Stage Design for Comparative Clinical Trials: the Heteroscedastic Solution" at Tamkang University.

*February 13, 2018, presented an invited colloquium: "Inferences for Normal Means: A story of three statisticians" at Math Club, Le Moyne College.

*June 1, 2018, presented an invited colloquium: "A Two-Stage Design for Comparative Clinical Trials: the Heteroscedastic Solution" at Beijing Normal University.

*August 1, 2018, gave a contributed paper: “A Curtailed Two-Stage Selection and Testing Procedure for Comparative Clinical Trials”, at the Joint Statistical Meetings, American Statistical Association, held in Vancouver, Canada.

*August 2, 2018, gave a contributed paper: “Selecting Among Treatments with Two Bernoulli Endpoints” at Joint Statistics Meetings, American Statistical Association, held in Vancouver, Canada.

*December 14, 2019, gave an invited paper: “On Selecting the Best Treatment with Two Binary Endpoints in Comparison with a Standard” at the 11th International Conference on Multiple Comparison Procedures held in Taipei, Taiwan.

*August 3, 2020, gave an online poster entitled “Two-Sample Procedures for Testing the Equivalence of two Outcomes each with two Binary Endpoints” at the Joint Statistical Meetings held in Philadelphia, PA.

*May 25, 2022, gave an invited talk entitled “An Integrated Formulation for Comparing Bernoulli Treatments with a Control” at the 35th New England Statistics Symposium, Storrs, Connecticut.

*August 7, 2022, co-presented a contributed paper entitled “A Restricted Subset Selection Procedure for Selecting the Largest Normal Mean Under Heteroscedasticity” at 2022 Joint Statistical Meetings in Washington D. C.

*June 6, 2023, presented an invited presentation “Selecting Among Treatments with Two Bernoulli Endpoints” at the 36th New England Statistics Symposium, Boston University, Boston, Massachusetts.

*August 6, 2023, presented a contributed paper “On Comparing Treatments with Two Bernoulli Endpoints to a Standard” at 2023 Joint Statistical Meetings in Toronto, Canada.

*December 28, 2023, presented an invited seminar “On Selecting Treatments with Multiple Bernoulli Endpoints” at Academia Sinica, Taipei, Taiwan.

*January 9, 2024, presented an invited seminar entitled “A Story of Three Statisticians” at Shanghai University of Finance and Economics, Shanghai, China.

*June 28, 2024, presented a contributed talk entitled “On Selecting Among Populations with 2 Bernoulli Endpoints” at 33rd South Taiwan Statistics Conference, Kaohsiung, Taiwan.

*July 5, 2024, presented an invited talk “On Selecting Among Treatments with two Bernoulli Endpoints” at Shanghai University of Finance and Economics, Shanghai, China.