



Wheyming Tina Song (桑慧敏)

Professor

Ph.D., Purdue University, U.S.A., 1988

Statistical Aspects of Stochastic Simulation,

Applied Operations Research, Probability and Statistics

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Wheyming Tina Song is a professor in the Department of Industrial Engineering at the National Tsing Hua University in Taiwan. She received her undergraduate degree in statistics and master's degree in industrial engineering at Cheng-Kung University in Taiwan in 1979. She then received master's degrees in applied mathematics in 1983 and industrial engineering in 1984, both from the University of Pittsburgh. She received her Ph.D. from the School of Industrial Engineering at Purdue University in 1989. She joined Tsing Hua in 1990 after spending one year as a visiting assistant professor at Purdue IE. Professor Song received the Outstanding University-Wide Teaching Award from the National Tsing Hua University in 1993. Her research honors include the 1988 Omega Rho (International Operations Research Honor Society) Outstanding Student Paper Award, the 1990 IIE Doctoral Dissertation Award, and the 1996 Distinguished Research Award from the National Science Council of the Republic of China. She is currently served as an associate editor of the Journal of Simulation Modeling, Practice, and Theory, and a member of the editor board for European Journal of Industrial Engineering .

Independent Consultant Experience

Intech Corporation (Effective Automation Solution)

Industrial Technology Research Institute (2005-2010)

Chinese Telecommunication Laboratories. (2005-2006)

Quality Assurance and Industrial Training Service Department, Industrial Technology Research Institute—Center for Measurement Standards.

Quality management Consultant for Chin-Phonex Corporation. (2005-2008)

主辦真善美科學領袖營，長佳生技出資 (2000 - present)

資策會 (2012.07 - present)

Awards

1996 Distinguish Research Award from the National Science Council of the Republic of China.

1995 Best paper Award from the Journal of Chinese Industrial Engineering

1994 Research Award from the National Science Council of the Republic of China.

1993 Outstanding University Wide Teaching Award (one of the six winners), National Tsing Hua University.

1990 IIE Doctoral Dissertation Award (the second-place recipient), International Industrial Engineering

Conference, San Francisco, California 1990. Thesis Title: Estimators of the Variance of the Sample Mean: Quadratic Forms, Optimal Batch Sizes, and Linear Combinations.

1988 Omega Rho Student Paper Award (one of four national winners), TIMS/ORSA Joint National Meeting, Washington, DC, April 1988. Paper Title: "On the Dispersion Matrix of Variance Estimators of the Sample Mean in the Analysis of Simulation Output."

1986, 1987, 1988 David Ross Fellowship, Purdue Research Foundation.

清華大學 97 學年度傑出專書「機率與推論統計學」(桑慧敏,2007) 清華大學 95, 96, 97, 98, 99, 100 學年度教師學術卓越獎。國科會大專校院 100 年度特殊優秀人才獎。

國際期刊編輯與國際會議委員

擔任 JSMPT and EJIE 兩個國際期刊的編輯, 與 IASTED 模擬學國際會議委員

1. Journal of Simulation Modeling Practice and Theory (Area Editor)
2. European Journal of Industrial Engineering (Editor Board)
3. International Program Committee (IPC), IASTED International Conference on Modeling, Identification and Control.

Professional Activities

Member

American Statistical Association (ASA)

Operations Research Society of America (ORSA)

The Institute of Operations Research and Management Sciences (INFORMS)

Institute of Industrial Engineers (IIE)

Omega Rho, International Operations Research Honor Society

The Institute of Management Sciences (TIMS)

產學研究 (Industry Projects) (2008-2012)

1. 財團法人工業技術研究院

- 計劃名稱: 車輛污染排放量召回改正模式分析
- 計劃年時間: 2008.7.1 – 2009.6.30
- 計劃金額: NT\$350,000
- 此產學合作持續五年 (2005-2009), 包括兩個課題: (1) 使用中小汽油小客車污染排放之資料分析, (2) 國內能源消耗分析。

有四位清大研究生共同參與此二計畫並接受工研院機械所經費之補助。本研究團隊協助工業研究院機械所車輛中心以應用統計方法進行車輛(汽車、機車)之能源與污染相關資料分析。內容包含車輛引擎劣化係數分析、污染物排放量管制流程制定、汽油油耗預測、車輛召回計畫制定等。具體成效為經濟部能源局採用此研究數據與結果對國內車輛之燃油與污染之相關政策進行修正與改善。本團隊負責每年工研院機械所舉辦的年會中統計資料分析報告。機械所, 環保署, 與進口汽車廠商對本團隊的表現皆為好評。可詢問前任機械所車輛部經理顧復中與機械所車輛部經理姜曉峰。

參與本計劃研究生曾美境畢業後加入該研究院擔任正職，專門負責車輛污染排放量召回改正模式分析。

2. 長佳生物科技股份有限公司

- 計劃名稱：真善美科學領袖人才培育 (Cultivate the Youth to Create a Better World Through Science)
- 計劃年時間：2010.3.1. – 2011.2.31
- 計劃經額：NT\$617,000
- 成果：主辦「真善美科學領袖人才培育計劃」。訓練小六生能獨力思考 (能想) 能上台報告 (能說)，與能寫心得的能力。計劃名稱乃是期盼這些小六生將來成為科學領袖人才，能以真善美的世界作為人生的目標。於 2010.6.6 第一天上課起，每兩周星期日上午 9:00-12:00 在清華大學上課。我負責規畫全年的 18 次課程，並且全年無休的代領第一堂的討論課程 (Discussion Session)。第一屆學生已於 2011.4.24. 作成果發表。每位學生上台報告的內容與演說的能力讓與會人士看到本計劃的主題：真善美科學領袖人才培育；國家的希望在這些未來的主人翁身上。長佳生物科技公司第二屆與第三屆 (今年) 的真善美科學領袖人才培育計劃就是跟據我所規畫出的 18 次課程為藍圖。

3. 力成科技股份有限公司

- 計劃名稱：半導體晶片封裝脫層之可靠度原理與風險管理 (Reliability and Risk Management for De-lamination in IC-BGA Assembly Processes)
- 計劃年時間：2012.7.1. – 2012.12.31
- 計劃經額：NT\$400,000
- 成果：因指導一在職研究生之緣故，已從事該研究課題 6 個多月。已建構脫層現象之要因魚骨圖，並從中找出重要因子。所以有此產學合作之機會。未來要完成之工作是能在特定成本限制下，建構 IC 元件品質最佳化，並制定標準化方案作業流程 (SOP)。方法與步驟包括：(1) 建立在各種實際瑕疵情況下，IC 元件最佳化模型；(2) 建立數學模型以找到最佳化的部份因子實驗與穩健設計；(3) 制定標準化方案作業流程 (SOP)。

4. 國科會應用型產學計劃 (與力成科技股份有限公司合作)

- 計劃名稱：半導體晶片封裝脫層之可靠度原理與風險管理 (Reliability and Risk Management for De-lamination in IC-BGA Assembly Processes)
- 計劃年時間：2012.11.1. – 2013.11.30
- 計劃經額：NT\$2250,000

5. 財團法人工業技術研究院

- 計劃名稱：透析患者血管狹窄估測實驗數據統計分析
- 計劃年時間：2012.7.1. – 2012.12.31
- 計劃經額：NT\$150,000
- 合作團隊 (總經費 500 萬元)
 - 台大醫院新竹分院：搭配新竹分院已獲衛生署核准於今年執行之「周邊血液血管內皮前驅細胞與血液透析病患血液透析用血管血管成型術後再狹窄之關係」研究計畫由心臟內科吳志成主任協助臨床測試 樣本取得與醫學判讀，經由臨床驗證提供有效數據證明本裝置的可用性
 - 材化所：於本計畫中將負責開發具有高抗噪集音器，可降低環境噪音並放大血管音

6. 資策會創新應用服務研究所

- (a) 計劃名稱: Facbook 數位媒體巨量資料分析與預測
- (b) 計劃年時間: 2012.7.20. – 2012.12.31
- (c) 計劃經額: NT\$200,000

PUBLICATIONS

Book

Probability and Statistics (in Chinese), first edition, 2007. Mc Graw Hill, Taipei.

Refereed Papers

1. Song, W.-M. T., M. Chih, (2012) Run Length Not Required: Optimal-Mse Dynamic Batch Means Estimators for Steady-State Simulations, *European Journal of Operations Research* forthcoming. (SCI) (top 5%, impact factor; SCI).
2. Song, W.-M. T., M. Chih, and S. Chuang (2012) Variance Reduction Techniques on Generating M/M/1 Processes in Simulation Output Analysis. *IEEE Transactions on Automatic Control*, forthcoming. (SCI)
3. Song, W.-M. T., and Bruce Schmeiser (2011) The Leading-Digit Procedure and Format for Displaying Tables of Statistical Point Estimators. *IIE Transaction*. DOI:10.1080/0740817X.2011.564601, Available online: 07 Mar 2011 (SCI).
4. Chen, Yi-chun and Song, Wheyming T. (2011), Effects of Sample Sizes in Phases I and II on p Control Chart Performance, *Communications in Statistics - Theory and Methods*. Forthcoming. (SCI, 22/246 in Eng./EE)
5. Song, W.-M. T. and Chen, Yi-chun (2011), Eighty Univariate Distributions and their Relationships Displayed in a Matrix Format, *IEEE Transactions on Automatic Control*. *IEEE Transactions on Automatic Control*, Vol. **56**, No. **8**, pp. 1979-1984. (top 5%, impact factor; SCI)
6. Song, W.-M. T. (2011) A Finite-Memory Algorithm of Batch Means Estimators in Simulation Output Analysis, *IEEE Transactions on Automatic Control*, Vol. **56**, No. **5**, pp. 1157-1162. (top 5%, impact factor; SCI)
7. Song, W.-M. T., Chih, M.C., and Bair, A. E. (2010). Improving the Efficiency of Physical Examination Services, *Journal of Medical System*, Vol. **34**, No. **4**, pp. 579-590. (SCI)
8. Song, W.-M. T. and Chih, M.C., (2010). Extended Dynamic Partial-Overlapping Batch Means Estimators for Steady-State Simulations, *European Journal of Operational Research*, **230**, pp. 640-651. (top 5%, total cites; SCI)
9. Song, W.-M. T, Chiu, W.C., Goldsman, D., and S. L. Liu (2010). Importance Sampling Techniques for Estimating the Bit Error Rate in Digital Communication Systems, *Journal of Chinese Institute of Industrial Engineering*, Vol. **27**, No. **1**, pp.1-14, 2010. (EI, TSSCI)
10. Bair, A. E., Song, W.-M. T., Chen, Y.C., and Morris, B. A. (2010). The Impact of Inpatient Boarding on ED Efficiency: A Discrete-Event Simulation Study, *Journal of Medical System*, 34(5), pp. 919-929. (SCI).
11. Song, W.-M. T. and Schmeiser, B. (2009). Omitting Meaningless Digits in Point Estimates: the Probability Guarantee of Leading-Digit Rules, *Operations Research*, **57**, 109 – 117. (top 5%, total cites; SCI)
12. Song, W.-M. T., Chia-Jung Chang, and S.L. Liu (2009). Robust Confidence Intervals for the Bernoulli Parameters, *Communications in Statistics – Theory and Methods*, **38**, 1 – 17. (SCI)
13. Yang, T. K., Song, W.-M. T., and Chih, M.C. (2009). Re-Visit the Dynamic- Overlapping-Batch-Means Estimator in Simulation Output Analysis, *Journal of Chinese Institute of Industrial Engineering*, Vol. **26**, No. **6**, pp.499-509, 2009. (EI, TSSCI)
14. Chiu, W.C., Goldsman, D., and Song, W.-M. T (2007). Bias-Aware Linear Combinations of Variance Estimators, *WSEAS Transactions of Electronics*, **4**, 167-173. (EI)

15. Song, W.-M. T. (2007). A finite-memory algorithm for Estimating the Variance of the Sample Mean, *IIE Transaction*, **39**, 703-712. (SCI)
16. Song, W.-M. and W.C. Chiu (2007), "A Five-class Variance Swapping Rule for Simulation Experiments – A correlated-Blocks design", *IIE Transaction on IE Research*, **39**, 713-722. (SCI)
17. Song, W.-M. T. (2005), "Relationships among Some Univariate Distributions", *IIE Transaction on IE Research*, **37**, 651-656. (SCI)
18. Song, W.-M. T., C. C. Su, and W.-C. Chu (2005), "A Pseudo-Random Assignment Strategy for the Estimation of Quadratic Response Surface Metamodels," *IIE Transactions on IE Research*, **37**, 657-666. (SCI)
19. Tseng, S.-T., Song, W.-M. and Chang, Y.-C. (2005). An Initial Intercept Iteratively Adjusted (IIIA) Controller: An Enhanced Double EWMA feedback Control Scheme, *IEEE Transactions on Semiconductor manufacturing*, **18**, 448-458. (SCI)
20. Song, W.-M. and C.C. Su (2002). Correlated Simulation Experiment in Quadratic Response Surface Designs *Journal of the Chinese Institute of Industrial Engineers*, **19**, 13-18. (in Chinese) (EI)
21. Chen, H., W.T. Song and Z. Lee (2002). RA-Quadsection Methods for Twodimensional Stochastic Rooting Finding, *Journal of the Chinese Institute of Industrial Engineers*, **19**, 93-104. (in Chinese)(EI)
22. Nelson, W., Swan, J., Goldsman, D., and Song, W.-M. (2001). Simple Procedures for Selecting the Best Simulated System when the Number of Alternatives is Large, *Operations Research*, **49** 950-963. (SCI)
23. Song, W.-M. T. and C. C. Su (1998), "A Three-Class Variance Swapping Technique for Simulation Experiments", *Operations Research Letter*, Vol.23, No.1-2, pp.63-70. (Supported by NSC under NSC81-0415-E007-570) (SCI)
24. Song W.-M. T. and Shih, N.H. (1998). Estimating a Multi-Gaussian Probability Using Adaptive Importance Sampling with a Truncated Gaussian Biasing Distribution, *International Journal of Operations and Quantitative Management*, **4**, 177 –185. (SCI)
25. Kao, Chiang, W.-M. T. Song, and S.P. Chen (1997). A Modified Quasi- Newton Method for Simulation Optimization, *International Transactions in Operational Research*, **4**, 223 - 233. (SCI)
26. Song, W.-M. T., C. C. Su, and C. T. Chiang (1997). Pseudo-Random Number Assignment Strategies in Taguchi Parameter Design, *Journal of the Chinese Institute of Industrial Engineering*, **14**, 267–273. (in Chinese)(EI).
27. Song, W.-M. T. (1996). On the Estimation of Optimal Batch Sizes in the Analysis of Simulation Output, *European Journal of Operational Research*, **88**, 304–319. (SCI)
28. Song, W.-M. T. and C.C. Su (1996). An Extension of the Multiple-Blocks Strategy on Estimating Simulation Metamodels, *IIE Transactions on IE Research*, **28**, 511-519. (SCI)
29. Song, W.-M. T., L.C. Hsiao, and Y.J. Chen (1996). Generation of Autocorrelated Random Variables in the Analysis of Simulation Input Analysis, *European Journal of Operational Research*, **94**, 194–202. (SCI)
30. Song, W.-M. T., and C. C. Su (1996). Pseudo-Random Number Assignment Strategies—A Correlated Random Block Effect Metamodels, *Journal of the Chinese Institute of Industrial Engineering*, **13**, 263–269. (in Chinese)(EI)
31. Shih, N.H. and W.-M.T. Song (1996). "Correlation-Induced Variance Reduction in Regenerative Simulation," *Operations Research Letters*, Vol. **19**, No. **1**, pp. 17-23.
32. Shih, N.H. and W.-M. T. Song (1995). Estimating Simulation Metamodels using Correlated Control Variates, *Communications in Statistics—Simulation and Computation* **24**, 79–90. (SCI)
33. Shih, N.H. and Song W.-M. T. (1995). Robust Consideration on Importance Sampling in Digital Communication System, *Journal of the Chinese Institute of Engineers*, **18**, 713–718. (EI)
34. Song, W.-M. T. and B.W. Schmeiser (1995). Optimal Mean-Squared-Error Batch Sizes, *Management Science*, **41**, 110–123. (SCI)
35. Song, W.-M. T., C. C. Su, and B. R. Hwang (1995). Pseudo-random number Assignment Strategy: The

- Relationship between Simulation Model, Metamodel, and Experiment Design, *Journal of the Chinese Institute of Industrial Engineering*, **12**, 193–201. (in Chinese)(EI)
36. Song, W.-M. T., and Y.J. Chen (1995). Generation of Autocorrelated Random Variables Considering Lag-one and Lag-two Correlation Coefficients, *Journal of the Chinese Institute of Industrial Engineering*, **12**, 305-313. (in Chinese)(EI)
 37. Song, W.-M. T. and B.W. Schmeiser (1993). Variance of the Sample Mean: Properties and Graphs of Quadratic-Form Estimators, *Operations Research*, **41**, 501-517. (SCI)
 38. Su, C.C. and W.-M. T. Song (1993). Pseudo-random Number Assignment Strategy in Orthogonal Array Designs, *Journal of the Chinese Institute of Industrial Engineering* **10**, 187-193. (in Chinese)(EI)
 39. Song, W.-M. T. and B.W. Schmeiser (1988). On the Dispersion Matrix of Variance Estimators of the Sample Mean in the Analysis of Simulation Output, *Operations Research Letters*, **7**, 259-266. (SCI)

Conference Papers

1. Chuang, Samping and Song, W. T. (2011), "A Well-Defined Interpretation of the Rule of Thumb for the Bernoulli Parameter", Proceedings of the 7th International Conference on Mathematics, Statistics and its Applications, July 21-23, 2011, Bangkok, Thailand.
2. Song, W. T., Lin, C. H Chao-Hung Lin, and Chunag, Michael (2011), "Reliability Tests on Resin Coated Insulation System for Electrical Transformers", Proceedings of the 7th International Conference on Mathematics, Statistics and its Applications, July 21-23, 2011, Bangkok, Thailand.
3. Song, Wheyming T. and Chen, Yi-chun (2010), "Relationships Among Eighty Univariate Distributions Displayed in a Matrix Format, Proceedings of the Winter Simulation Conference 2010, Baltimore, Maryland, U.S.A.
4. Bair, Aaron E., Song, Wheyming T., Chen, Yi-chun, and Morris, Beth A. (2009), "The Impact of Inpatient Boarding on Emergency Department Crowding: Discrete-Event Simulation Study, Proceedings of the 2009 Spring Simulation Multiconference: 42nd Annual Simulation Symposium, San Diego, California, U.S.A.
5. Song, W.-M. T. and Schemiser, B. (2009) Omitting Meaningless Digits: Analyzing LDR(1), the Standard Leading-Digit Rule, Proceedings of the 2009 Winter Simulation Conference, December 7-10, Austin, Texas, USA.
6. Song, W.-M. T. and Schemiser, B. (2008), "Displaying Statistical Point Estimators: The Leading-Digit Procedure", Proceedings of the 2008 Winter Simulation Conference, 407-412.
7. Song, W.-M. T, Aaron E. Bair, and Mingchang Chih (2008), "A Simulation Study on the Impact of Physician Starting Inquiry Time and Staggered Arrival Policy in a Physical Examination Service", Proceedings of the 2008 Winter Simulation Conference, December 7-10, Florida, USA.
8. Song, W.-M. T and Mingchang Chih (2008), "Data Dependent Finite Memory Algorithm in the Analysis of Output ANALysis". Proceedings of the 2008 Winter Simulation Conference, December 7-10, Florida, USA.
9. Song, W.-M. T., and Chang, C. J.. (2006), "Improved Confidence Intervals for the Bernoulli Parameter", Proceedings of the Joint Statistical Meetings, August 6-10, Seattle, USA.
10. Song, W.-M. T., Chiu, W.C., and Goldsman, D. (2005), "Importance Sampling Techniques for Estimating the Bit Error Rate in Digital Communication Systems", *Proceedings of the 2005 Winter Simulation Conference*, 2710-2717.
11. Song, W.-M. and W.C. Chiu (2004), "Estimating the Bit Error Rate in Digital Communication Systems", *IASTED International conference on Communications Systems and Applications*, July 8-10, Banff, Canada.
12. Song, W.-M. and Schmeiser, B. T. Song. (2003) "Reporting Meaningful Digits of Point Estimators for Random Experiments," IASTED International conference on Artificial Intelligence and Soft Computing (ASC 2003), No. 385004. July 14-July 16, Banff, Canada.
13. Cheng-Shang Chang, Y-M Chiu, and W.-M. T. Song. (2001), "On the Performance of Multiplexing Independent Regulated Inputs", *ACM SIGMETRICS/Performance Conference*, 184-193. (EI)

14. Song, W.-M. T. and T.-K. Yang (2000), "On the Estimation of Optimal Sizes of Overlapping Batch mean Estimators", *Proceedings of the 5th Annual International Conference on Industrial Engineering –Theory, Applications and Practice*, December 13-15, W719.2.
15. Song, W.-M. T., C.-C. Sui, and W.-C. Chu. (2000), "Correlated Simulation experiment in Quadratic response surface Design", *Proceedings of the 5th Annual International Conference on Industrial Engineering –Theory, Applications and Practice*, December 13-15, R706.1.
16. Song, W.-M. T. and Shin, N. H. (1998), "Estimating a Muti-Gaussian Probability Using Adaptive Importance Sampling with a Truncated Gaussian Biasing Distribution", *Proceedings of Quantitative Management Techniques and Applications*, 101-106.
17. Song, W.-M. T., N. H. Shih, and M.-J. Yuan (1997), "Optimal Quadratic-form Estimator of the Variance of the Sample Mean", *Proceedings of the 1997 Winter Simulation Conference*, 246-252.
18. Schmeiser, B. and Song, W.-M. T. (1996), "Batching Methods in Simulation Output Analysis: What we know and what we don't", *Proceedings of the 1996 Winter Simulation Conference*, 122-127.
19. Song, W.-M. T. and C. C. Su (1995), "Designing Pseudo-Random Number Assignment Strategies for Simulation Experiments", *Proceedings of the 1995 Winter Simulation Conference*, 1400-1403.
20. Song, W.-M. T. and B. W. Schmeiser (1994), "Reporting the Precision of Simulation Experiments", *Proceedings of New Directions in Simulation for Manufacturing and Communication*, 402-407.
21. Shih, N. H. and W.-M. T. Song (1994), "On the Robustness Consideration of Importance Sampling", *Proceedings of New Directions in Simulation for Manufacturing and Communication*, 326-329.
22. Shih, N. H. and W.-M. T. Song (1994), "Adaptive Importance Sampling with Truncated Gaussian Biasing Distribution", *Proceedings of the Third Statistics Conference in Taiwan*, 46-62.
23. Song, W.-M. T. and L. C. Hsiao (1993), "Generation of Autocorrelated Random Variables with a Specified Marginal Distribution", *Proceedings of the Winter Simulation Conference*, 374-377.
24. Schmeier, B.W. and W.-M. T. Song (1989), "Inverse-Transformation Algorithms for Some Common Stochastic Processes", *Proceedings of the 1989 Winter Simulation Conference*, 490-496.
25. Song, W.-M. T. and B. W. Schmeiser (1988), "Minimal-Mse Linear Combinations of Variance Estimators of the Sample Mean", *Proceedings of the Winter Simulation Conference*, 414-421.
26. Song, W.-M. T. and B. W. Schmeiser (1988), "Estimating Standard Error: Empirical Behavior of Asymptotic Mse-Optimal Batch Size", *Proceedings of the 1988 Symposium on the Interface of Computing Science and Statistics*, 575-580.
27. Schmeiser, B. W. and W.-M. T. Song (1987), "Correlation Among Estimators of the Variance of the Sample Mean", *Proceedings of the 1987 Winter Simulation Conference*, 309-316.

Technical Reports

1. Chih, Mingchang and Wheyming Tina Song and Mingchang Chih (2013), "An efficient approach to implement dynamic batch means estimators in simulation output analysis", revision of *The Journal of the Chinese Institute of Industrial Engineers*.
2. Song, W.-M. T. (2013), "Revisiting the Rule of Thumb of the Bernoulli Parameter" Submitted to the journal of *Communications of Statistics – Simulation*. Revision
3. Chao-Hung Lin, Song, W.-M. T., and S. L. Liu (2013), "Reliability Tests on Resin Coated Insulation System for Electrical Transformers." Submitted to the journal of *European Journal of Operational Research*.
4. Song, W.-M. T., Boray Huang, and Wenchi Chiu (2013), "Stratified Generation: A Correlated Random Variate Generation." Submitted to *European Journal of Operational Research*.
5. Song, W.-M. T. and Chih, M. C. (2013), "Investigate the Robustness of the Leading-Digit Rules (without assuming normality)."

6. Song, W.-M. T., Wu, W.C., and Shen-Tsaing Tseng (2013), "Optimal Design for a Degradation Test." Submitted to the journal of European Journal of Operational Research.
7. Song, W.-M. T., S. L. Liu, Chen, C.Y. (2013), "Monitoring and Adjusting Industrial Processes Simultaneously in One Control Chart." Submitted to European Journal of Operational Research.

Editorial Boards

1. European Journal of Industrial Engineering (EJIE) (Editorial Board) (SCI 1.104)
2. Simulation Modeling, Practice, and Theory (SIMPAT) (Associate Editor)

Presentations(2005-2012)

Professional Research

1. "Variance Reduction techniques on Generating M/M/1 Processes in Simulation Output Analysis", January 3, 2013, The 4th POMS (Production and Operations Management) International Conference, Hongkong.
2. "Glaucoma Detection using Linear-Combinations of Neuro Inference Systems", January 3, 2013, The 4th POMS (Production and Operations Management) International Conference, Hongkong.
3. "7-Eleven Rule: Simulation Output Analysis", June 25, 2012, Informs International meeting, Beijing, China.
4. "Glaucoma data Analysis", June 25, 2012, Informs International meeting, Beijing China.
5. "Network Reliability: Independence not Required", June 25, 2012, Informs International meeting, Beijing, China.
6. Risk management on Home Land Security, Hsinchu, Taiwan, March 13, 2012. (One of the four Panelist)
7. "A Well-Defined Interpretation of the Rule of Thumb for the Bernoulli Parameter", Proceedings of the 7th International Conference on Mathematics, Statistics and its Applications, July 21-23, 2011, Bangkok, Thailand.
8. "Reliability Tests on Resin Coated Insulation System for Electrical Transformers", Proceedings of the 7th International Conference on Mathematics, Statistics and its Applications, July 21-23, 2011, Bangkok, Thailand.
9. Cultivate youth to create a better world through science. April, 25, 2011. **(Keynote speaker)**
10. "Statistics: Modern Augury? –A New Rule to Display Statistical experiments" senior project conference on engineering and technology. KMUTT, Bangkok, Thailand. 3/24/2011. **(Keynote speaker)**
11. Cultivate youth to create a better world through science. June 6, 2010 **(Keynote speaker)**
12. "Reporting the precision of simulation experiments," School of Engineering, Chiao Tung University, Shanhi, China, April, 2010.
13. Song, W.-M. and Bruce Schmeiser "Omitting Meaningless Digits: Analyzing LDR(1), the Standard Leading-Digit Rule", the 2009 Winter Simulation Conference, Texas, USA, December 12-15, 2009.
14. Song, W.-M. and Michael Chuang "A Discrete-Event Simulation Study on Physical Examination Services in Taiwan", Informs, San Diego, USA, October 12-15, 2009.
15. Song, W.-M., Yicern Chen, and S. L. Liu "A Matrix Form of Eighty Univariate Distributions", Informs, San Diego, USA, October 12-15, 2009.
16. Song, W.-M., Bruce Schmeiser, and Samping Chuang "Displaying Meaningful Digits of statistical point estimates," 2009 Applied Statistical Symposium, San Francisco, USA, 6/21-6/24, 2009.

17. Song, W.-M. and Michael Chuang "A Simulation Study on the Physical Examination Service in Taiwan", 2009 Applied Statistical Symposium, San Francisco, USA, 6/21-6/24, 2009.
18. Song, W.-M. "Omitting Meaningless Digits in Simulation Output Analysis," National University of Singapore, Singapore, 8/21/2009.
19. Song, W.-M., Aaron E. Bair, and Y.C. Chen, "The Impact of Boarding Policies on the Degree of ED Crowding: A Discrete-Event Simulation Study", 42nd Annual Simulation Symposium (ANSS'09), San Diego, USA, 3/22-3/27, 2009.
20. Song, W.-M. and Bruce Schmeiser, "Displaying Statistical Point Estimators: The Leading-Digit Procedure", the 2008 Winter Simulation Conference, Florida, USA, December 7-10, 2008.
21. Song, W.-M., Aaron E. Bair, and Mingchang Chih, "A Simulation Study on the Impact of Physician Starting Inquiry Time and Staggered Arrival Policy in a Physical Examination Service", the 2008 Winter Simulation Conference, Florida, USA, December 7-10, 2008.
22. Song, W.-M. and Mingchang Chih, "Data Dependent Finite Memory Algorithm in the Analysis of Output ANalysis". the 2008 Winter Simulation Conference, Florida, USA, December 7-10, 2008.
23. Song, W.-M. "舉一反三的「一般化學習方式」", 屏東科技大學工工系, November 14, 2008.
24. Song, W.-M. "A Study of Efficiency in a Routine Medical Physical Examination", Informs, Seattle, USA, 11/3-11/7, 2007.
25. Song, W.-M. "Partial Overlapping Batch Means Control Charts for Auto-correlated Process Data", Informs, Seattle, USA, 11/3-11/7, 2007.
26. Song, W.-M. "On the Investigation of Economic Performance of the Partial Overlapping Batch-Means Control Charts," Informs, Seattle, USA, 11/3-11/7, 2007.
27. Song, W.-M. T. and Bruce Schemiser, "The Leading Digit Procedure and Format for Displaying Tables of Simulation Output", Informs, San Diego, USA, 7/15-7/18, 2007.
28. Song, W.-M. and Wenchi Chiu "Bias-aware Linear Combination of Variance Estimators in Simulation Output Analysis", the Tenth INFORMS Computing Society meeting (ICS 2007), 1/3-1/5, 2007 Florida, 2007.
29. Song, W.-M. and C.J. Cheng "Improved Confidence Intervals for the Bernoulli Parameters", Joint Statistical Meeting, Seattle, USA. 8/6-8/10, 2006.
30. Song, W.-M. and M.C. Chih "On Dynamic Partial-Overlapping Batch Means in Simulation Output Analysis", INFORMS international conference Hong Kong, 6/25-6/28 2006.
31. Song, W.-M. and S. L. Cheng "Investigation of Properties on the Discount Factors of Some variations of Double EWMA Controllers", INFORMS international conference Hong Kong, 6/25-6/28 2006.
32. Song, W.-M. and Wenchi Chiu "Linear Combinations of Variance Estimators of the Sample Mean", INFORMS international conference Hong Kong, 6/25-6/28 2006.
33. "The leading-digit format for displaying tables of statistical point estimator and their standard error", Department of Industrial Engineering and Logistic Management of Hong Kong university of science and technology. February 3, 2006, Hong Kong.
34. "The leading-digit format for displaying tables of statistical point estimator and their standard error", Mechanical Engineering and Engineering management of City university. February 3, 2006, Hong Kong.
35. Song, W.-M. and Wenchi Chiu "Importance Sampling Techniques for Estimating the Bit Error Rate in Digital Communication Systems", Proceedings of the 2005 Winter Simulation Conference, December 3-6, 2005 Orlando, FL, USA.

普及一般民眾之科學教育演講 (2011-2012)

1. “統計示範教學”，成功大學統計系，統計學教學改進研討會 (2011.3.9),
2. “統計示範教學”，逢甲統計系 (2011.5.29),
3. “解析之美：理論 = 無限個實例” 臺灣大學工工系 (2011.10.9),
4. “解析之美：理論 = 無限個實例”，屏科大 (2011.10.28),
5. “解析之美：理論 = 無限個實例”，南台科大 (2011.6.7),
6. “舉一反三的「一般化學習方式」”，大陸天津大學管理與經濟學院 (2011.9.10),
7. “舉一反三的「一般化學習方式」”，大陸廣西大學職企管 (EMBA)(2011.9.24),
8. “解析之美：理論 = 無限個實例”，中山大學教學推廣組 (2012.4.28)
9. “解析之美：理論 = 無限個實例”，屏科大在職企管 (EMBA) (2012.4.19)
10. “The world is built on Probability”，台灣大學電機系 (2012.4.19)
11. “解析之美：理論 = 無限個實例”，宏達電 (2012.4.10)
12. “解析之美：理論 = 無限個實例”，力成科技 (2012.5.16)
13. “解析之美：理論 = 無限個實例”，清華大學工工系 (2012.5.24)
14. “解析之美：理論 = 無限個實例”，東園國小教師成長營 (2012.6.6)
15. “解析之美：理論 = 無限個實例”，高雄科技大學 (2012.12.26)
16. “解析之美：理論 = 無限個實例”，清大科管院 (2012.12.15)