# Jeng-Jung Fang (方正中)

Department of Industrial Management and Information

Southern Taiwan University of Science and Technology

No. 1, Nan-Tai Street, Yongkang Dist.,

Tainan 71005, Taiwan

Office: D205-3

**2**: 886-6-2533131 ext. 4136

: jjfang@stust.edu.tw



### Education

- PhD, Department of Industrial Engineering and Management, Oklahoma State University, USA, 1995/07
- Master, Department of Industrial Engineering and Management, Oklahoma State University, USA, 1989/06

## **Area of Specialty**

Statistical Process Control, Designs of Experiments, Mixture Experiments,

## **Work Experience**

- Associate Professor, Department of Management and Information Technology, Southern Taiwan University of Science and Technology, 1995/08 to present
- Industrial Engineer, QC Department, Chinese Petroleum Corporation, 1989-1992.

### **Publications**

### **Journal Papers:**

- 1. Fang, Jeng-Jung, Jin-Sang Yang, Peng-San Wang and Jen-Shin Wu (2016), "Applying Central Composite Design for the Process Parameter Optimization on the Aquatic Feed Production Process", Quantitative Management, Vol. 3.
- 2. Yang, Jin-Shan, Fang, Jeng-Jung and Chin-Wei Su(2015), "A Study of Integrated Inventory Models with Reduced setup cost and Unequal sub-batch sizes", Journal of Quantitative *Management*, 12(2), 39-46.
- 3. Yang, Jin-Shan, Fang, Jeng-Jung and Ching-Yi Chen (2015), "A Study of Integrated Inventory Models with Carbon Emission and Quality Cost", Journal of Far East University, 32(3), 217-22.
- 4. Yang, Jin-Shan, Fang, Jeng-Jung and Liang-Yin Chiang (2015), "Study of Air Force Supplies with Balanced Scored Card", Journal of *Industrial and Business Management*, 8(1), 27-40.
- 5. Yang, Jin-Shan, Fang, Jeng-Jung and Mao-Sin Zeng (2014), "A study of integrated inventory model of reduced holding cost and lot-size deliveries inventory model", Journal of Quantitative *Management*, 11(2), 15-22.
- 6. Yang, Jin-Shan, Fang, Jeng-Jung and Chun-Teng Chang (2014), "A Study of Integrated Inventory Models with cost Allocation", Journal of *Industrial and Business Management*, 7(1), 47-55.
- 7. Yang, Jin-Shan, Fang, Jeng-Jung and Pei-Ti Shih (2014), "A Study of Integrated Inventory Models with Carbon Emission cost", Journal of Industrial and Business Management, 7(1), 63-74.

- 8. Yang, Jin-Shan, Fang, Jeng-Jung and Sheng-Siang Jiang (2013), "A Study of Integrated Inventory Model of Reduced Ordering Cost", Journal of Southern Taiwan University of Science and Technology, 38(4), 127-136.
- 9. Yang, Jin-Shan, Chih-Yang Tu, Sheng-Siang Jiang (2013), "A study of the integrated inventory models with vehicle capacity and production space constraint", Journal of *Industrial and Business Management*, 6(1), 34-43.
- 10. Yang, Jin-Shan, Jeng-jung Fang, Shih-chun Lin (2011), "A Study of Integrated Inventory Model of Production Space Limit And Reduced Setup Cost", Journal of Southern Taiwan University of Science and Technology, 34(4), 19-30.
- 11. Yang, Jin-Shan, Fang, Jeng-Jung and Wang, Hui-Cheng (2011), "A Study of the Integrated Inventory Model with Random Delivery Time", Journal of Far East University, 28(3), 187-196.
- 12. Fang, Jengjung and Kenneth E. Case (1996), "Using a Correlation Test for Normality", Journal of Quality Technology, vol. 28, no. 3, pp. 356-362. (SCI).

# **Conference Papers:**

- 1. Fang, Jeng-Jung, Jin-Sang Yang, Pa-San Chu and Ming-Shir Chou (2016), "Applying Six Sigma Method to Reduce Production Cost on the Black Matrix Process of Color Filter.", The E-learning and Information Technology Symposium 2016, Tainan, p. 54.
- 2. Fang, Jeng-Jung, Jin-Sang Yang, Cha-Yu Lin and Jen-Shin Wu (2016), "Using 3-Way ANOVA to Analyze the Customer Numbers of Convenient Stores.", The E-learning and Information Technology Symposium 2016, Tainan, p. 34.
- 3. Fang, Jeng-Jung, Jin-Sang Yang, Li-Ming Huang and Ja-Yu Chang (2016), "Applying Experimental Design for the Parameters Optimization on Ganoderma Lucidum Medium.", The E-learning and Information Technology Symposium 2016, Tainan, p. 21.
- 4. Yang, Jin-Shan, Fang, Jeng-Jung and Jia-Zen Lin (2015), "A Study of Integrated Inventory Models with Carbon Emission and Reduced setup cost", 2015 International Conference of Asian Regional Economy and Local Industry Development.
- Yang, Jin-Shan, Fang, Jeng-Jung and I-Shian Loun (2015), "A Study of Integrated Inventory Models with Carbon Emission and Production Space Limit", 2015 International Conference of Asian Regional Economy and Local Industry Development.
- 6. Fang, Jeng-Jung, Yang, Jin-Shan, Fang, and De-I Wang (2015), "The Effect of Service Innovation and Service Quality on Customer Satisfaction and Customer Loyalty An Example of Domestic Car Rental", 2015 Conference of Management Instructors and Practical Teaching and the 7th Master Thesis of Southern Taiwan, 74-75.
- 7. Yang, Jin-Shan, Fang, Jeng-Jung and Jeng-Ji Gaou (2015), "A Study of Integrated Inventory Models with Purchasing Cost and Carbon Emission", 2014 Conference of Industrial Management and Information Application Innovation, 55.
- 8. Yang, Jin-Shan, Fang, Jeng-Jung and Jeng-Ji Gaou (2015), "The Research of Reorder Point- An Example of a Hospital Medicine, 2014 Conference of Industrial Management and Information Application Innovation, 69.
- 9. Yang, Jin-Shan, Fang, Jeng-Jung and Ching-Yi Chen (2015), "A Study of Integrated Inventory Models with Carbon Emission and Reduced Quality Cost", 2014 Conference of Industrial Management and Information Application Innovation, 83.

- 10. Yang, Jin-Shan, Fang, Jeng-Jung and Yin-Chan Jan (2015), "A Study of Integrated Inventory Models with Unequal Sub-batch Sizes", 2014 Conference of Industrial Management and Information Application Innovation, 147.
- 11. Yang, Jin-Shan, Jeng-jung Fang, Chin-Wei Su (2015), "A Study of Integrated Inventory Model with Reduced Setup Cost and Unequal Sub-batch Sizes", 2014 Conference of Industrial Management and Information Application Innovation, 160.
- 12. Yang, Jin-Shan, Fang, Jeng-Jung and Chan-Yan Tsai (2015), "A Study of Integrated Inventory Models with Carbon Emission and Setup Time", 2014 Conference of Industrial Management and Information Application Innovation, 167.
- 13. Yang, Jin-Shan, Fang, Jeng-Jung and Su-Ting Hwang (2015), "A Study of Integrated Inventory Models with Carbon Emission and Delivery Space Space", 2014 Conference of Industrial Management and Information Application Innovation, 367.
- 14. Fang, Jeng-Jung, Jin-Sang Yang and Peng-San Wang (2014), "The study of process parameters optimization on automatic spraying robot", 2014 conference on Information technology and management ", Kaohsiung, p4.
- 15. Fang, Jeng-Jung, Jin-Sang Yang and Peng-San Wang (2013), "The application of regression analysis on the core size change of furnace welding of water tank", 2013 conference on Industrial management and Information application ", Tainan, pp. 165~174.
- 16. Fang, Jeng-Jung, Jin-Sang Yang and Peng-San Wang (2013), "The parameter optimization on the backend process of touch panel bonding process", 2013 conference on Industrial management and Information application ", Tainan, pp. 176~185.
- 17. Fang, Jeng-Jung, Jin-Sang Yang and Peng-San Wang (2013), "The optimization process of variables and mixture components proportions on the production process of epoxy resin", 2013 conference on Industrial management and Information application ", Tainan, pp. 186~195.
- 18. Fang, Jeng-Jung, Jin-Sang Yang and Peng-San Wang (2012), "The process parameter optimization of power coating process using central composite design.", 2012 the 8<sup>th</sup> conference on theories and practices in international business", Tainan, p. 7.
- 19. Fang, Jeng-Jung, Jin-Sang Yang and Peng-San Wang (2012), "The application of artificial neural network and genetic algorithm to reduce the nonconforming rate of plastic injection process.", 2012 the 8<sup>th</sup> conference on theories and practices in international business", Tainan, p. 11.
- 20. Fang, Jeng-Jung, Jin-Sang Yang and Peng-San Wang (2012), "Taguchi method combined central composite design optimization fo process parameters in polarized lenses.", 2012 the 8<sup>th</sup> conference on theories and practices in international business", Tainan, p. 57.
- 21. Fang, Jeng-Jung, Jin-Sang Yang and Peng-San Wang (2012), "The Parameter optimization of screening printing using experimental design.", 2012 the 8<sup>th</sup> conference on theories and practices in international business", Tainan, p. 58.
- 22. Fang, Jeng-Jung, Jin-Sang Yang and Peng-San Wang (2012), "The gauge repeatability and reproducibility with interaction under nested design for different gauges and operators.", 2012 the 8<sup>th</sup> conference on theories and practices in international business", Tainan, p. 59.
- 23. Fang, Jeng-Jung, Jin-Sang Yang and Peng-San Wang (2012), "The trend analysis of internet group shopping.", 2012 the 8<sup>th</sup> conference on theories and practices in

- international business", Tainan, p. 8.
- 24. Fang, Jeng-Jung, Jin-Sang Yang and Peng-San Wang (2012), "The study of process parameter optimization on the application of design of experiments for balling process of multilayer ceramic capacitor.", 2012 Global Business and Management Conference", Kaohsiung, p. 119.
- 25. Fang, Jeng-Jung, Jin-Sang Yang and Peng-San Wang (2011), "The Gauge repeatability and reproducibility analysis with different gauges and operators.", 2011 The 7<sup>th</sup> Conference of Industry Globalization Academic and Practice, pp. 128-177.
- 26. Fang, Jeng-Jung, Jin-Sang Yang and Peng-San Wang (2011),"The Parameter Optimization of Color Filter Polishing Process", 2011 The 7<sup>th</sup> Conference of Industry Globalization Academic and Practice, pp. 192-205.
- 27. Fang, Jeng-Jung, Jin-Sang Yang, Peng-San Wang and Si-Bing Ling (2011),"The Parameter Optimization for the Fermentation of Bacterial Cellulose", 2011 Industry Global Logistic Academic and Practice Conference, pp. 407-418.
- 28. Fang, Jeng-Jung, Jin-Sang Yang, Peng-San Wang and Gia-Ying Yang (2011), "Apply Regression Analysis and Genetic Algorithm on Optimization of the Fermentation of Bacterial Cellulose", 2011 the 4<sup>th</sup> Management and Decision Academic Conference, BA321
- 29. Fang, Jeng-Jung, Jin-Sang Yang, Peng-San Wang and We-Ming Cheng(2011), "The Gauge Repeatability and Reproducibility for the Nested Problem without Interaction, p.46
- 30. Wang, Peng-Sen and Jeng-Jung Fang (2010), "The Optimization of Medicine Formulation Using Mixture", International MultiConference of Engineers and Computer Scientists, Hong Kong.
- 31. Fang, Jeng-Jung, Jin-Sang Yang and Su-Ting Shu (2010), "Applyg Taguchi method and Central Composite Designs on the Parameter Optimization for Polariscope Process", 2010 Industrial Engineering and Management Conference.
- 32. Fang, Jeng-Jung, Jin-Sang Yang and Chern-Ern Wu (2010),"Apply Box-Behnken Design on the Parameter Optimization for Zone Control Chart", 2010 Industrial Engineering and Management Conference.
- 33. Fang, Jeng-Jung, Jin-Sang Yang, Wen-Hong Zhen and Ming-I Jiang (2010), "The Study of Parameter Optimization for Polariscope Process", 2010 Cross Strait Management Academic and Practice Conference, pp. 592-597.
- 34. Fang, Jeng-Jung, Jin-Sang Yang, Peng-San Wang and Kung-Yu Tseng (2010), "Apply Central Composite Design on the Parameter Optimization for Zone Control Chart", 2010 Cross Strait Management Academic and Practice Conference, pp. 609~614.
- 35. Fang, Jeng-Jung, Jin-Sang Yang, Peng-San Wang and Chauo-Gu Gaou (2010)," Apply Central Composite Design on the Nonconforming Rate Improvement of Plastic Injection Process", 2010 Cross Strait Management Academic and Practice Conference", 575~580.
- 36. Fang, Jeng-Jung, Jin-Sang Yang and Zhong-Ming Le (2010), "Apply Central Composite Design, Artificial Neural Network and Genetic Algorithm on the Parameter Optimization of Zone Control Chart", 2010 Global Business and Management Conference", Kaohsiung, pp. 2092~2103.
- 37. Fang, Jeng-Jung, Jin-Sang Yang, Wen-Hong Zhen, Wang, Peng-Sen and Yu-Yang Hu (2010), "Apply Six-Sigma, Artificial Neural Network and Genetic Algorithm on the Parameter Optimization of Laser-Cutting Process", 2010 Global Business and

- Management Conference", Kaohsiung, pp. 1962~1970.
- 38. Fang, Jeng-Jung, Jin-Sang Yang, Wen-Hong Zhen, Wang, Peng-Sen and Gia-Ying Yang (2010), "Apply Central Composite Design, Artificial Neural Network and Genetic Algorithm on the Parameter Optimization of CNC Lathe", 2010 Global Business and Management Conference", Kaohsiung, pp. 2104~2112.
- 39. Fang, Jeng-Jung, Jin-Sang Yang, Wen-Hong Zhen, Wang, Peng-Sen and Bor-Chen Hsu (2009), "The Study on Measurement Method with Multiple Characteristics", 2009 the 3<sup>rd</sup> Management and Decision Making Conference, Nan-Hwang University.
- 40. Fang, Jeng-Jung, Jin-Sang Yang, Wen-Hong Zhen, Wang, Peng-Sen and I-Huang Chou (2009), "The GR&R Study with Interaction under Mixed Model by Control Chart Method", 2009 the 3<sup>rd</sup> Management and Decision Making Conference, Nan-Hwang University, pp.328~329.
- 41. Fang, Jeng-Jung, Jin-Sang Yang, Wen-Hong Zhen, Wang, Peng-Sen and I-Huang Chou (2009), "The GR&R Study without Interaction under Mixed Model by Control Chart Method", 2009 Taiwan Business and Management Conference, Far-Eastern University, p.93.
- 42. Fang, Jeng-Jung, Jin-Sang Yang, Wen-Hong Zhen, Wang, Peng-Sen and Chern-Gi Giang (2009), "Apply Six-Sigma on the Parameter Optimization of LED Laser Cutting Process", 2009 Taiwan Business and Management Conference, Far-Eastern University, p.61 °
- 43. Fang, Jeng-Jung, Jin-Sang Yang, Wen-Hong Zhen, Wang, Peng-Sen and Churn-Jiar Chen (2009), "Apply Design of Experiment on the Process Improvement of CNC Lathe", 2009 Taiwan Business and Management Conference, Far-Eastern University, p.62.
- 44. Fang, Jeng-Jung, Jin-Sang Yang, Wen-Hong Zhen, Wang, Peng-Sen and Fang-Jeng Gorng (2009), "The Part Variation Study of Measurement System with Interaction", 2009 Taiwan Business and Management Conference, Far-Eastern University, p.95.
- 45. Fang, Jeng-Jung, Jin-Sang Yang, Wen-Hong Zhen, Wang, Peng-Sen, Lin, Fang-Zu and Ming-Shing Giang (2009), "The GR&R Study with different Gauges and Operaotrs", 2009 Taiwan Business and Management Conference, Far-Eastern University, pp.96.
- 46. Fang, Jeng-Jung, Jin-Sang Yang, Wen-Hong Zhen and Fang-Jeng Gorng (2008), "The Part Variation Study of Measurement System without Interaction", 2008 Enterprise Internationalization Conference, Chang-Zong University, pp.89.
- 47. Fang, Jeng-Jung and Ming-Jer Wu (2007), "Apply Design of Experiments on the development of NCHW-1 alloy wire process", 2007 Technology and Management Conference, Shin-Kao Business College, pp.179~184.
- 48. Fang, Jeng-Jung, Ming-Shin Gian, Shan-Dar Wu, Gin-Fan Shiao and Sung-Jen Chen (2007), "The Study of Optimal Formula on the Mixture with Multiple Characteristics", the 12<sup>th</sup> Grey System Conference, pp.196~205.
- 49. Fang, Jeng-Jung and Ming-Hsun Chiang (2007), "The Study of Optimal Mixture Formulation with Multiple Characteristics",
- 50. Fang, Jeng-Jung and Sang-Dar Wu (2007), "The Optimal Parameter Study on the Mixture with Multiple Characteristics of Su-Zeng Capsules", 2007 the 1<sup>st</sup> Academic and Industry Conference of Industrial Engineering and Management Association, Ming-Ji Technology University, pp.36~.

#### **Books**

■ Engineering Economy (2006), coauthored with Hwe-Ming Kou, Chi-Chaer Gao and Chan-Hai Co., ISBN 986-157-271-6.

#### Dissertation

■ Fang, Jeng-Jung (1995) "Designs and Models for the Mixture Problem with Categorized Components" Ph.D. Dissertation, Department of Industrial Engineering and Management, Oklahoma State University, USA

### **Grants**

- 1. Small and Medium Enterprise administration, Ministry of Economic Affairs, "The Process Improvement of Fermentation for Bacterial Cellulose", 2010.
- 2. Industrial Development Bureau, Ministry of Economic Affairs, "Apply Response Methodology on the Parameter Optimization for the Fermentation of Bacterial Cellulose", 2010.
- National Science Council Foundation, No: 98-2221-E-218 -026, "Apply Response methodology, Genetic algorithm, Artificial Neural Network and Grey Theory on the Mixture Experiment with Multiple Characteristics of Biochemical Pharmacy Industry", Coworker with Peng-Sen Wang, 2009.
- 4. National Science Council Foundation, No: NSC- 94-2213-E-218-012, "The Repeatability and Reproducibility Analysis with Interaction between Products and Operators", Coworker with Peng-Sen Wang, 2005.
- 5. Uni-President Co., "The Process Improvement Project of the 200Hp Compressor Machine in Aquatic Products Plant", 2005.

# **Entrusted Practical Projects**

- 1. The Process improvement of Film Printing, Han-San Printing Co.,  $2015/05/01^{\sim}$  2015/07/31, 311040064.
- 2. The Technical Support of 5S Quality, Han-Yu Machinery Co.,  $2014/01/01^{\sim} 2014/03/31$ , 311030393.
- 3. The Technical Support of Quality and Material Managements, Han-San Printing Co.,  $2012/11/01^{\sim} 2013/01/31$ , 311010558.
- 4. Uni-President Co., "The Process Improvement Project of the 200Hp Compressor Machine in Aquatic Products Plant", 2005.

# **Honors and Awards**

- Marquis Who's Who in the World, 2009
- National Science Council Research Award, 1997

### **Academic and Professional Service**

- Academia-Industry Consortium for Southern Taiwan Science Park, Instructor for Statistical Process Control and Process Capability Analysis, 2015/09
- 2. Academia-Industry Consortium for Southern Taiwan Science Park, Instructor for Statistical Process Control and Process Capability Analysis, 2014/09.
- 3. Academia-Industry Consortium for Southern Taiwan Science Park, Instructor for Designs of Experiments, 2013/07.
- 4. Academia-Industry Consortium for Southern Taiwan Science Park, Instructor for

- Statistical Process Control and Process Capability Analysis, 2013/09.
- 5. Hean-San Printing Co., Consultant for Process Research, 2012.
- 6. Wan-Tai Resins Machinery Co., Consultant for Process Research, 2012.
- 7. Ching-Tai Resins Chemical Co., Consultant for Process Research, 2012.
- 8. Academia-Industry Consortium for Southern Taiwan Science Park, Instructor for Designs of Experiments, 2011/08.
- 9. Academia-Industry Consortium for Southern Taiwan Science Park, Instructor for Statistical Process Control and Process Capability Analysis, 2011/08.
- 10. Academia-Industry Consortium for Southern Taiwan Science Park, Instructor for Designs of Experiments, 2011/06.
- 11. Academia-Industry Consortium for Southern Taiwan Science Park, Instructor for Statistical Process Control and Process Capability Analysis, 2011/05.
- 12. Der-Sen Biochemical Technology Co, Instructor for Designs of Experiments, 2010.
- 13. Ching-Tai Resins Chemical Co., Instructor for Mixture Experiments, 2010.
- 14. Taiwan Pulp and Paper Co., Instructor for Statistical Process Control and Process Capability Analysis, 2010.
- 15. TongTai Machinery Co., Instructor for Taguchi Engineering, (2009~2010).
- 16. Yei-Hwa Industrial Co. Ltd, Instructor for Statistical Process Control and Process Capability Analysis, 2009.
- 17. Yuen Neng Enterprise Co. Ltd., Instructor for Statistical Process Control and Process Capability Analysis, 2008.
- 18. Academia-Industry Consortium for Southern Taiwan Science Park, Instructor for Taguchi Engineering, 2008.
- 19. Uni-President Co. Ltd., Instructor for Regression Analysis, Taguchi Engineering and Designs of Experiments, 2007-2008.
- 20. Coretronic Corp., Instructor for Statistical Process Control and Six-Sigma, 2006.