BIOGRAPHICAL SKETCH
Bill T.L. Tseng, Ph.D., CMfgE

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PROFILE
- 20 years of engineering experience in industrial and academic settings; work closely with industry; adaptive to fast change of technology
- Extensive experience & practical knowledge in the current design and industrial engineering environment; versatile both academically and with hands-on implementation
- Currently Associate Professor and the Graduate Program Director in the Department of Industrial, Manufacturing and Systems Engineering, The University of Texas, El Paso, TX.

EDUCATION/CERTIFICATION

Certified Manufacturing Engineer	Society of Manufacturing Engineers, #42108233	2002
Ph.D. - Industrial Engineering	University of Iowa	1999
M.S. - I.E. (Decision Sciences/Operation Research)	University of Wisconsin – Madison	1995
M.S. - I.E. (Manufacturing Systems)	University of Wisconsin – Madison	1993
B.S. - Industrial Engineering	Tunghai University (Taiwan)	1987

PROFFESSIONAL EXPERIENCE
I. RESEARCH INTERESTS
Renewable Energy and Bio-medical Engineering
Internet Based Manufacturing/Computer-Based Decision Support Systems
Sustainability Engineering
Data Mining and Knowledge Management
Quality Improvement Technology

II. TEACHING ACTIVITIES
<u>COURSES DEVELOPED AND TAUGHT IN THE PAST 7 YEARS</u>
Advanced Green Manufacturing, Design for Manufacturability, Modeling and Analysis of manufacturing Processes, Strategic design of Manufacturing Processes, Probability and Statistics at UTEP, Project Planning and Control; Systems Design and Operations; Simulation; Industrial Statistics; Quality Assurance; Design of Experiment; Problem Solving/Research at WKU. Production Systems; Concurrent Engineering; Simulation at the Univ. of Iowa.
<u>COURSES DEVELOPED FOR CONSULTING INDUSTRY</u>
6 Sigma Training Program at Tyco Inc., Franklin, Kentucky (Summer 2000)

WORK EXPERIENCE

2013 - August	Interim Director, Research Institute for Manufacturing & Engineering Systems (RIMES)
2009 – Present	Associate Professor and the Graduate Program Director, Department of Industrial, Manufacturing and Systems Engineering, The University of Texas, El Paso, TX
2004 – 2009	Assistant Professor, Department of Mechanical and Industrial Engineering, The University of Texas, El Paso, TX
2000 – 2004	Assistant Professor, SME Student Chapter Advisor, Department of Architectural and Manufacturing Sciences, Western Kentucky University, Bowling Green, KY
2000 Summer	Tyco Inc. 6 Sigma Training Program Instructor, Franklin, KY
1999 – 2000	Adjunct Instructor (Co-Instructor) / Research Fellow, Industrial Engineering Department / University of Iowa Hospital and Clinics, The University of Iowa, Iowa City, IA

Development a data mining based support system for patients with lung abnormalities referred to as solitary pulmonary nodules (SPNs)

1995 – 1999   Teaching Assistant/Research Assistant, Industrial Engineering Department
                Intelligent Systems Laboratory, The University of Iowa, Iowa City, IA
                Development of a preference-based rule induction system for engineering design
1993 – 1995   Graduate Assistant, Center for Quality and Productivity Improvement (CQPI)
                The University of Wisconsin – Madison, WI
                Responsible for data analysis support for quality related projects from industry
1991 – 1993   Graduate Assistant, Industrial Engineering Department
                The University of Wisconsin – Madison, WI
1989 – 1991   Assistant Engineer / Programmer
                Computer Application Group CTCI Corp. (The Largest Consulting Firm), Taipei, Taiwan
                Design and implement manpower allocation prediction systems, including visual network communication and data transformation

CONSULTING
1. State of New Jersey of Commission on Higher Education, 6/26-28/2005.
2. Rockwell Collins, 2002-2003, Quality Control in PCB Design Using Data Mining Based Approach
3. Weyerhaeuser Inc., 2002 –2003, Ergonomics Design for Corrugator Operators
4. Tyco Inc., 2000-2001, 6 Sigma and Project Management Training Program

CONFERENCES ORGANIZED
1. The Industrial Engineering Research Conference 2008 – session title: Data Mining, Knowledge Management and Applications (Session Chair), Vancouver, Canada, May 17 - 21, 2008.
2. 2006 INFORMS Annual Conference – session title: Data Mining, Knowledge Management and Applications (Session Chair), Pittsburg, PA, November 5-8, 2006.
3. The 36th International Conference on Computers &Industrial Engineering – session title: Information Technology & Project Development Management (Session Chair) Taipei, Taiwan, June 20-23, 2006,
4. The Industrial Engineering Research Conference 2006 – session title: Data Mining (Session Chair), Orlando, FL, May 20-24, 2006.
5. The Annual Industrial Engineering Research Conference 2004 – session title: Defect Detection and Avoidance (Session Chair), Houston, Taxes, May 15-19, 2004
6. The 8th Annual International Conference on Industrial Engineering Theory, Applications and Practice - session title: Intelligent Product Design and Manufacturing (Session Co-Chair), Las Vegas, Nevada November 10 - 12, 2003.
7. The 6th World Multiconference on Systemics, Cybernetics and Informatics (SCI) Conference – invited session: Information System Development and Management (Session Co-Chair), Orlando, Florida, July 14 - 18, 2002.
8. The 1st – 5th Global Automotive Conferences (Planning Committee), WKU, Bowling Green, Kentucky, 2000-2004.

RECENT PUBLICATIONS
Refereed Journal Papers
1. Tseng, B., Huang, C.C., and Fraser, K.,"Rough Set Based Induction in Medical Decision Making Using Credible Classification and Preference," *Data and Knowledge Engineering Journal*, 2014 (accepted).
2.Shuvo, M., Tseng, B., Khan, M., Karim, H., Delfin, D., and Lin, Y., "Nanowire Modified Carbon Fibers for Enhanced Electrical Energy Storage," *Journal of Applied Physics*, 2013 (accepted).
3. Huang, C.C., Tseng, B., Jiang, F, Fan, Y.N. and Hsu, C.H., "Rough set theory: a novel approach for extraction of robust decision rules based on incremental attributes," *Annals of Operations Research, Springer*, 2013 (accepted).
4. Haque, A, Mandal, P., Meng, J., Srivastavaz, A.K. and Tseng, B.,"A Novel Hybrid Approach Based on Wavelet Transform and Fuzzy ARTMAP Network for Predicting Wind Farm Power Production," *IEEE Transactions on Industry Applications,* Vol. 49, No. 5, September/October 2013.
5. Tseng, B., Gung, R. and Huang, C.C., "Performance Evaluation for Pull-Type Supply Chains Using an Agent Based Approach," *American Journal of Industrial and Business Management,* Vol. 3, pp. 91-100, 2013.
6. Fraser, K., Tseng, B. and Hvolby, H, "TQM in New Car Dealerships: A Study from the Firms' Perspective," *The TQM Journal*, Vol. 25, No. 1, pp. 5-17, 2013.

7. Huang, C.C., Tseng, B., Fan, Y.N. and Hsu, C.H., "Alternative Rule Induction Methods Based on Incremental Object Using Rough Set Theory," *Applied Soft Computing*, Vol. 13, pp. 372-389, 2013.

8. Tseng, B., Kwon, Y. and Devaram, P., "E-Quality: Using Dimensional Index Values for Improving Classification Accuracy," *Journal of Concurrent Engineering,* Vol. 20, No. 1, pp. 43-53, 2012.

9. Chung, W. and Tseng, B., "Discovering Business Intelligence from Online Product Reviews: A Rule-Induction Framework," *Expert Systems with Applications*, Vol. 39, No. 15, pp. 11870-11879, 2012.

10. Liang, W., Huang, C.C., Tseng , B, Lin, Y and Tseng, J., "The Evaluation of Intelligent Agent Performance — An Example of B2C e-commerce Negotiation," *Computer Standards & Interfaces,* 2012 Vol. 34, No. 5, pp. 439-446.

11. Lai, M.C., Sohn, H., Tseng, B. and Bricker, D.L., "A Hybrid Benders/Genetic Algorithm for Vehicle Routing and Scheduling Problem," *International Journal of Industrial Engineering*, Vol. 19, No. 1, pp. 33-46, 2012.

12. Chiou, R., Kwon, Y. and Tseng, B.,"Micro-3D Vision for MEMS Positioning," Vol. 3, No. 4, pp. 17-25, *Computers in Education Journal*, October – December 2012.

13. Sohn, H., Bricker, D., Tseng, B., "Mean Value Cross Decomposition for Two-Stage Stochastic Linear Programming with Recourse," *The Open Operational Research Journal*, Vol. 5, pp. 34-42, 2011.

14. Tseng, T. B., Huang, C., Fan, Y., "Autonomous Rule Induction from Data with Tolerances in Customer Relationship Management," *Expert Systems with Applications,* 2011, Vol. 38, No. 5, pp. 4889-4900.

15. Zou, Z., Tseng**, B.,** Sohn, H., Song, G. and Gutierrez, R., "A Rough Set Based Approach to Distributor Selection in Supply Chain Management," *Expert Systems with Applications*, Vol. 38, pp. 106-115, 2011.

16. Ho, J.C., Lopez, F.J., Ruiz-Torres, A. J. and Tseng, B., "Minimizing Total Weighted Flowtime subject to Minimum Makespan on Two Identical Parallel Machines," *Journal of Intelligent Manufacturing,* Vol 22, pp. 179-190, 2011.

17. Huang, C.C., Liang, W., Lin, S., Tseng, B. and Chiang, H., "A Rough Set Based Approach to Patent Development with the Consideration of Resource Allocation," *Expert Systems with Applications,* Vol. 38, pp. 1980-1992, 2011.

18. Chiou, R., Kwon, Y., Tseng, B., Kizirian, R. and Yang, Y., "Real-Time Stereoscopic 3D for e-Robotics Learning," *Journal of Systemics, Cybernetics and Informatics*, Vol. 9, No. 1, pp. 8 – 13, 2011.

19. Lai, M., Sohn, H., Tseng, B. and Chiang, C., "A Hybrid Algorithm for Capacitated Plant Location Problems," *Expert Systems with Applications*, Vol. 37, pp. 8599-8605, 2010.

20. Chiou, R., Kwon, Y., Tseng, B., Yang, Y. and Kizirian, R., "Enhancement of Online Robotics Learning Using 3-D Visualization Technology," *Journal of Systemics, Cybernetics and Informatics*, 2010, Vol. 8, Issue 3, pp. 46-51, 2010.

21. Ho, J.C., Tseng, B., Ruiz-Torres, A. J and Lopez, F.J, "Minimizing the Normalized Sum of Square for Workload Deviations on m Parallel Processors," *Computers & Industrial Engineering*, Vol. 56, No.1, pp. 186-192, 2009.

22. Chiou, R., Kwon, Y. and Tseng, B., "Java Programming for Online Quality Control Laboratory Integrated with Remote Robot," *Computer Education Journal*, Vol. XVIII, No. 3, pp. 42-54, July-September, 2009.

23. Ho, J.C., Shalishali, M., Tseng, B., and Ang, D., "Opportunities in Green Supply Chain Management," *The Coastal Business Journal*, Vol. 8, pp. 18–31, 2009.

24. Fan, Y.N., Tseng, B., Chern, C.C. and Huang, C.C., "Rule Induction Based on an Incremental Rough Set," *Expert Systems with Applications*, Vol. 36, No. 9, pp. 11439-11450, November 2009.

25. Tseng, B. and Huang, C.C., "Design Knowledge Externalization: A Case Study of Modular Deign of the Set Top Box," *Decision Support Systems*, Vol. 44, pp. 909-924, 2008.

26. Ho, J.C., Tseng, B., Lopez, F.J. and Ruiz-Torres, A. J., "A Backward Approach LPC-Based Constructive Heuristic," *Journal of the Chinese Institute of Industrial Engineers,* Vol. 25, No. 4, pp. 275-286, 2008.

27. Tseng, B. and Huang, C.C., "A Data Mining Based Approach to Feature Selection in Customer Relation Management," *The International Journal of Management Science, OMEGA Journal*, Vol. 35, No. 4, pp. 365-383, 2007.

28. Ho, J.C., Chang, Y-L, Tseng, B., "Heuristics for Scheduling Operations in MRP: Flow-shop Case,"*Academy of Information and Management Sciences Journal,* Vol. 9, No. 2, pp. 111-129, 2006.

29. Tseng, B., Huang, C.C., Jiang, F. and Ho, J., "Applying a Hybrid Data Mining Approach to Preferred Suppliers Prediction," *International Journal of Production Research*, Vol. 44, No.14, pp. 2935-2954, 2006.

30. Huang, C.C and Tseng, B., "A Rough Set Based Approach to Product Design Document Retrieval," *International Journal of Production Research*, Vol. 44, No. 14, pp. 2889-2911, 2006.

31. Huang, C.C., Tseng, B., Li, M.Z. and Gung, R, "Models of Multi-Dimensional Analysis for Qualitative Data and its Application," *European Journal of Operational Research*, Volume 174, Number 2, pp. 983-1008, 2006.

32. Kwon, Y., Tseng, B., & Ertekin, Y., "Characterization of Closed-loop Measurement Accuracy in Precision CNC Milling," *Journal of Robotics & Computer Integrated Manufacturing*, Vol. 22. No. 4, pp. 288-296, 2006.

33. Tseng., B. and Huang, C.C., "Capitalizing on Knowledge: A Novel Approach to Crucial Knowledge Determination," *IEEE Transactions on Systems, Man, and Cybernetics Part A: Systems and Humans*, Vol. 35, No. 6, pp. 919-931, 2005.

34. Huang, C.C., Tseng, B. and Kusiak, A.,"XML-based Management of Analytical Knowledge," *IEEE Transaction on Systems, Man, and Cybernetics, Part A -- Systems and Humans*, Vol. 35, No. 5, pp. 629-640, 2005.

35. Tseng, B., Kwon, Y. and Yalcin, E., "Feature-Based Rule Induction in Machining Operation Using Rough Set Theory for Quality Assurance," *Robotics and Computer-Integrated Manufacturing*, Vol. 21, pp. 559-567, 2005.

36. Tseng, B., Liang, W.Y., Huang, C.C. and Chian, T.Y., "Applying Genetic Algorithm for the Development of the Components-Based Embedded System," *Computer Standards & Interfaces,* Vol. 27, pp. 621-635, 2005.

37. Kwon, Y., Ertekin, Y. and Tseng, B., "In-Process and Post-Process Qualification of Machining Accuracy in Circular CNC Milling," *Machine Science and Technology*, Vol. 9, pp. 1–12, 2005.

38. Huang, C.C. , Tseng, B., Gung, R. and Chang, H., "An Agent-based Web Services Solution to Collaborative Product Design," *International Journal of Knowledge-based and Intelligent Engineering Systems,* Vol.9, pp. 63-79, 2005.

39. Tseng, B., Jothishankar, M.C. and Wu, T., "Quality Control Problem in Printed Circuit Board Manufacturing – an Extended Rough Set Theory Approach," *Journal of Manufacturing Systems,* Vol. 23, No. 1, pp. 56-72, 2004.

40. Peng, J.T., Chien, C.F. and Tseng, B., "Rough Set Theory for Data Mining for Fault Location on Distribution Feeder," *IIE Proceedings*, vol. 151, No. 6, pp. 689-697, 2004.

41. Huang, C.C. and Tseng, B.,"Rough Set Approach to Case-Based Reasoning," *Expert Systems with Applications*, Vol. 26, No. 3, pp. 369-385, April 2004.

42. Tseng, B., Huang, C.C., Chu, H.W., Gung, R., "Novel Approach to Multi-functional Project Team Formation," *International Journal of Project Management*, Vol. 22, pp. 147-159, 2004.

43. Kwon, Y., Yalcin, E., and Tseng, B., "Characterization of Tool Wear Measurement with Relation to the Surface Roughness in Turning," *Machining Science and Technology*, Vol. 8, No. 1, pp. 39-51, 2004.

44. Yalcin, E., Kwon, Y. and Tseng, B., "Identification of Common Sensory Features for the Control of CNC Milling Operations under Varying Cutting Conditions," *International Journal of Machine Tools and Manufacture*, Vol. 43, pp. 897-904, 2003.

45. Kwon, Y., Fischer, G. and Tseng, B., "Novel Approach to Process Variations Using Fuzzy Adaptive Modeling for the Control of Surface Roughness," *Journal of Manufacturing Systems,* Vol. 21, No. 2, pp. 440-450, 2002.

46. Kusiak, A., Kern, J. A, Kernstine, K. H. and Tseng, B., "Autonomous Decision-Making: A Data Mining Approach," *IEEE Transactions on Information Technology in Biomedicine*, Vol. 4, No. 4, pp. 274-284, December 2000.

47. Tseng, B. and Kusiak, A., "Book Review: Deviant Logic, Fuzzy Logic, Beyond the Formalism," *IIE Transaction*, Vol.30, No. 9, pp.857, 1998.

48. He, D., Kusiak, A., Tseng, B., "Delayed Product Differentiation: A Design and Manufacturing Perspective," *Computer Aided Design*, Vol. 30, No. 2, pp. 105-113, 1998.

49. Huang, C.C., Liang, W.Y., Tseng, B. and Chen, P.H.," The Rough Set Based Approach to Routing Problems in Reverse Logistics, "*International Journal of Logistics Research and Applications* (in review).

50. Huang, C.C., Tseng, B. and Chen, K, "Novel Approach to Tourism Analysis Using Rough Set," *Annals of Tourism Research* (in review).

51. Tseng, B., Huang, C.C. and Y.C., "A Hybrid Data Mining Approach with Agent Based Framework to Quality Control of the Manufacturing Process," *European Journal of Industrial Engineering* (in review).

52. Huang, C.C., Tseng, B. and Tang, C.Y., "Feature Extraction Using Rough Set Theory in Service Sector from Incremental Perspective," *European Journal of Operation Research* (in review).

53. Huang, C.C., Tseng, B. and Chen, K.C., "A Multiple Outcomes Rough Set Model Applied to Tourism Decision Making," Information Sciences (in review).

54. Huang, Y.S. and Tseng, B., "A Multi-Round Negotiation Process for Two-Echelon Supply Chains with Multiple Retailers," Manufacturing and Service Operations Management (in review).

55. Tseng, B., Kwon, Y. and Garcia, C., "Optimal Placement of Wind Turbines on Non-flat Terrain Using Cluster Identification and Multi-objective Genetic Algorithm," *International Journal of Industrial Engineering* (in review).

56. Bhuyan, M.K., Rodriguez-Devora, J., Yanez, M., and Tseng, B., "Silicon Substrate as a Novel Cell Culture Device for Myoblast Cells," *Journal of Future Science* (in review).

57. Rajib, M., Tseng, B., Shuvo, M., Karim, H., Delfin, D. and Y. Lin, "Temperature Influence on Energy Density of Nano-composite for Dielectric Capacitor," (To be submitted to *Journal of Smart Materials and Structures*).
58. Tseng, B., Kwon, Y. and Chilukuri A. "Quality Assessment in Bone Scaffolds through Internet Based Robotic Using Intelligent Data Mining," (To be submitted to *Expert Systems with Applications*).
59. Tseng. B. and Zheng, J., "E-quality Control in Automotive Parts Manufacturing Inspection Using Photometric Stereo Reconstruction and 3D Measurement," (To be submitted to *Journal of Intelligent Manufacturing Systems*).
60. Espino, N., Tseng, B. and Guadamuz, M., "Foreign Object Debris/Damage (FOD) Prediction in Aeronautics Manufacturing through Logistic Regression," (To be submitted to *Journal of Intelligent Manufacturing Systems*).
61. Tseng, B. and Koppella, M., "Critical Parts Retrieval for Medical Sustainability Using Design for Disassembly and Modularity," (To be submitted to *Journal of Intelligent Manufacturing Systems*).

Book Chapters
1. Tseng, B. and Huang, C.C., "A Hybrid Data Mining Approach with Agent Based Framework to Quality Control of the Manufacturing Process," *Encyclopedia of Business Analytics and Optimization*, 2013 (accepted).
2. Huang, C.C., Tseng , B., Lin, H.S., "Patent Infringement Risk Analysis Using Rough Set Theory," 2010, *Visual Analytics and Interactive Technologies: Data, Text and Web Mining Applications*, Qingyu Zhang, Richard S. Segall and Mei Cao (Eds.), Information Science Reference (an imprint of IGI Global), Hershey, New York, US, pp. 123 – 150, 2010.
3. Kwon, Y., Chiou, R., Tseng, B. & Wu, T., "Chapter 25: Network-based Vision Guidance of Robot for Remote Quality Control," Book Title: Robot Vision, IN-TECH Publisher, Kirchengasse 43/3, A-1070, Vienna, Austria, March 2010, ISBN 978-953-307-077-3.
4. Huang, C.C., Tseng , B.,"Supply Chain Risk Management: Annotation of Knowledge Using Semi-Structured Knowledge Model," 2009, *Supply Chain Risk and Vulnerability: Tools and Methods for Supply Chain Decision Makers,* Teresa Wu and Jennifer Blackhurst (Eds.), Springer, New York, US, pp. 205-232, 2009.
5. Huang, C.C., Tseng , B.," Business Intelligence: Analytical Knowledge Warehousing," 2008, Encyclopedia of Data Warehousing and Mining - 2nd Edition, Idea Group Publishing, IRM Press.
6. Huang, C.C., Tseng , B., Chuang, H.F. and Fan. Y.N., 2007, "An Agent-based Approach to Enhance Agility of Supply Chain in a Heterogeneous Environment," *Trends in Supply Chain Design and Management: Technologies and Methodologies*, Jung, Hosang, Chen, F. Frank and Jeong, Bongju (Eds.), Springer, New York, US, pp. 149-180.
7. Tseng, B., Kwon, Y. and Wicker, R.B, "Chapter 20: Applying a Hybrid Data Mining Approach in Machining Operation for Surface Quality Assurance," Book Title: *Manufacturing The Future: Concepts-Technologies-Visions*, Publisher: ARS Press International, Vienna, Austria / Pro Literatur Verlag, Mammendorf, Germany, pp. 583- 604, 2006. ISBN: 3-86611-198-3.

Conference Proceedings
1. Sun, W, Tseng, B., Cabrera, S., Zhang, J., Vélez-Reyes, M. and Qian**,** W "Using Undiagnosed Data to Enhance Computerized Breast Cancer Analysis with a Three Stage Data Labeling Method," Proceedings of SPIE Medical Imaging, San Diego, CA, February, 16-20, 2014.
2.Chiou, R., Belu, R. and Tseng, B. ,"Infusion of Green Energy Manufacturing into Engineering and Technology Curricula," the International Mechanical Engineering Conference and Exposition (IMECE), San Diego, CA, November 15- 21, 2013.
3. Tseng, B., Kwon, J. and Garcia, C., "Wind Turbines Layout on Using Multi-Objective Genetic Algorithm," The Proceedings of the 17th International Conference on Industrial Engineering Theory, Applications and Practice, Pusan National University, Busan, South Korea, October 6 - 9, 2013.
4. Bhuyan, M.and Tseng, B., "Light Stimulated Control Release of Therapeutic Cells as Regenerative Medicine," Biomedical Engineering Society (BMES) Annual Meeting, Seattle, Washington, September 25-28, 2013.
5. Belu, R., Chiou, R. and Tseng, B., "Integrating Sustainability Concepts into Engineering and Technology Curriculum," *Proceedings of the 6th International Conference on Manufacturing Science and Education (MSE)*, Smart Sustainable Development, Sibiu, Romania, June 12-15, 2013.
6. Tseng, B., Chiou, R., Mandal, P., Garcia, C., Espino, N., Hu, Z., Romo, D. and Corella, M., "Cyber Based Layer Manufacturing with an On-line Testing System," *Proceedings of the American Society for Engineering Education 2013 Conference*, Atlanta, GA, June 23 - 26, 2013.
7. Chiou, R., Tseng, B., Ertekin, Y. and Carr, E., "A Graduate Engineering Technology Online Course in Sustainable and Green Manufacturing ," *Proceedings of the American Society for Engineering Education 2013 Conference*, Atlanta, GA, June 23 - 26, 2013.
8. Chiou, R., Belu, R.G., Mauk, M.G., Varr, E. and Tseng, B., "Student Learning Experience from Renewable

Energy Case Studies," " *Proceedings of the American Society for Engineering Education 2013 Conference*, Atlanta, GA, June 23 - 26, 2013.

9. Chuang, H.F., Huang, C.C., Tseng, B., Yi, S.R. and Lin, K. X., "A Novel Approach to Recyclable Component Classification," *Proceedings of the Industrial Systems Engineering Research 2012 Conference*, San Juan, Puerto Rico, May 18 - May 22. 2013.

10. Espino, N, Romo, D., Tseng, B. and Pineda, R., "Novel Predictive Risk-Based Algorithm for Data-Driven Surveillance Frequency of Suppliers," *Proceedings of the Industrial Systems Engineering Research 2012 Conference*, San Juan, Puerto Rico, May 18 - May 22. 2013.

11. Tseng, B., Zheng, J, Fraser, K, Ho, J.C., Mendez1, J., Espino, N., Mandal1, P, Huang, C.C. and Chiou, R., "E-quality Control in Solar Panel Inspection Using Photometric Stereo Reconstruction and 3D Measurement, " *Proceedings of the Industrial Systems Engineering Research 2012 Conference*, San Juan, Puerto Rico, May 18 - May 22. 2013.

12. Haque, A, Mandal, P., Meng, J., Srivastavaz, A.K., Tseng, B., and Senjyu, T, "A Novel Hybrid Approach Based on Wavelet Transform and Fuzzy ARTMAP Network for Wind Farm Power Production," *Proceedings of the 2012 IEEE Industry Applications Society (IAS) Annual Meeting*, Las Vegas, NV, October 7-11, 2012.

13. Ho, J.C., Ang, D. and Tseng, B., "Teaching Aggregate Planning in an Operations Management Course," Proceedings of the 2012 Southeastern INFORMS Conference, pp. 452- 460, Myrtle Beach, SC, October 4-5, 2012.

14. Tseng, B., Vargas-Hernandez, N., Chiou, R., Mandal, P., Koppella, K.V., Gonzalez M. and Mendez, J.V., "Integrating Rapid Manufacturing with Cyber Facility and Tutor System into Engineering Education," *Proceedings of the American Society for Engineering Education 2012 Conference*, San Antonio, TX, June 10 - 13, 2012.

15. Chiou, R., Mauk, M.G., Tseng, B. and Davis, B., "Robotics and Mechatronics-based Solar Cell Roughness Measurement Laboratory," *Proceedings of the American Society for Engineering Education 2012 Conference*, San Antonio, TX, June 10 - 13, 2012.

16. Tseng, B., Jiang, F., Huang, C.C., Chiou, R., Mandal, P., Gonzalez, M., Koppella, K.V. and Saavedra, J., "Quality Control of Bio Scaffold Using Intelligent Data Mining," *Proceedings of the Industrial Systems Engineering Research 2012 Conference*, Orlando, FL, May 19 - May 23. 2012.

17. Tseng, B, Zheng, J, Mendez, V.J., Mandal, P., Koppella, K.V., Huang, C.C., Chiou, R., and Garcia, C, "E-quality Control in Solar Panel Inspection Using Photometric Stereo Reconstruction," *Proceedings of the Industrial Systems Engineering Research 2012 Conference*, Orlando, FL, May 19 - May 23. 2012.

18. Huang, C.C., Tseng, B., "Rough Set Based Approach to Feature Selection from Incremental Perspective," *Proceedings of the Industrial Systems Engineering Research 2012 Conference*, Orlando, FL, May 19 - May 23. 2012.

19. Huang, C.C., Tseng, B., "Corporate Memory: Design for Reducibility, Reusability and Recyclability," *Proceedings of the Industrial Systems Engineering Research 2012 Conference*, Orlando, FL, May 19 - May 23. 2012.

20. Bonham, P.R. and Tseng, B., "E-Quality Manufacturing of Bio-parts Using Rough Set Theory," *Proceedings of the Industrial Systems Engineering Research 2012 Conference*, Orlando, FL, May 19 - May 23. 2012.

21. Tseng, B., Vargas-Hernandez, N., Chiou, R., Mandal, P., Gonzalez, M., Mendez, J.V. and Saavedra, J., "Cyber Based Layer Manufacturing with Virtual Facility," *Proceedings of the 2012 ASEE Gulf-Southwest Annual Conference, University of Texas, El Paso, TX, April 4-6, 2012.*

22. Haque1, A., Mandal, P. and Tseng, B., "Short-Term Prediction of Wind Farm Power Output Using a Hybrid Intelligent Algorithm Based on Meteorological Information,"*Proceedings of the 2nd Southwest Energy Science and Engineering Symposium*, El Paso, TX, March, 24, 2012.

23. Haque1, A., Mandal, P. and Tseng, B., "Wind Speed Prediction Using a Combined Intelligent Approach," *Proceedings of the 2nd Southwest Energy Science and Engineering Symposium*, El Paso, TX, March, 24, 2012.

24. Lopes, A., Pineda, R., Tseng, B. and Salcedo, O.S., "Service Systems Engineering: Emerging Skills and Tools," *Proceedings of the CSER, 2011.*

25. Huang, C.C., Fan, Y.N., Chuang, H.F., Tseng , B. and Hsu, C.H., "Rough Set Theory: An Alternative Rule Induction Approach Based on Incremental Object," *Proceedings of the International Conference on Business and Information (BAI) 2011*, Bangkok, Thailand, July 4, 2011.

26. Tseng, B., Pan, R., Awalt, C., Gandara, P., Zheng, J., and Gonzalez, M., "Digital Additive Manufacturing for Engineering Education: A Virtual Rapid Prototyping Simulator Approach," *Proceedings of the American Society for Engineering Education 2011 Conference*, Vancouver, BC, Canada, June 26 - 29, 2011.

27. Tseng, B., Gonzalez, M, Ho, J. C., Gandara, P., Huang, C.C., Chiou, R. and Zheng, J., "E-Quality Control in Additive Manufacturing Using Support Vector Machines and Dimensional Index," *Proceedings of the Industrial Engineering Research 2011 Conference*, Reno, NV, May 21 - May 25. 2011.

28. Tseng, B., Chilukuri, A., Gandara, P., Chiou, R., Ho, J. C., Huang, C.C., Zheng, J., "E-quality Assessment: Bio Part Inspection Using Intelligent Data Mining," *Proceedings of the Industrial Engineering Research 2011 Conference*, Reno, NV, May 21 - May 25. 2011.

29. Huang, C.C., Tseng, B. and Chen, K.C., "Multiple Outcomes Rule Induction Using Rough Set Theory to Tourism," *Proceedings of the Industrial Engineering Research 2011 Conference*, Reno, NV, May 21 - May 25. 2011.

30. Tseng, B., "Digital Additive Manufacturing for Engineering Education: A Virtual Rapid Prototyping Simulator Approach," *Proceedings of the Sun Conference,* El Paso, TX, March 10 - 11, 2011.

31. Chung, W. and Tseng, B., "Extracting Business Intelligence from Online Product Reviews: An Experiment of Automatic Rule-Induction," *Proceedings of the Thirty First International Conference on Information Systems,* Saint Louis, Missouri, December 12 - 15, 2010.

32. Chiou, R., Kwon, Y., Yang, Y.T., Kizirian, R. and Tseng, B., "Non-contact Surface Roughness Measurement for Remote Quality Control," Proceedings of the ASME 2010 International Manufacturing Science and Engineering Conference (MSEC2010), Erie, PA, 10/12 – 10/15, 2010.

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Presentation Abstract

1. Tseng, B., Yao, T.S., Aleti, K. and Devaram, P., "Clinical Engineering: Applying a Machine Learning Approach to Tumor Malignancy Prediction," 24th Southern Biomedical Engineering Conference, April 18 – 20, 2008, El Paso, TX.

2. Wu, C.H., Arcaute, K., Wicker, R.B. and Tseng, B., "Cardiovascular System Models with Dip-Coating Process Using Taguchi Design for Quality Assurance," 24th Southern Biomedical Engineering Conference, April 18 – 20, 2008, El Paso, TX.

3. Yao, T., Liu, K., Yang, L., Wu' Q. and Tseng, B. "Improvement of RFID Impedance Sensor for Gerd Detection," 24th Southern Biomedical Engineering Conference, April 18 – 20, 2008, El Paso, TX.

4. Yao, T., Yang, L., Wu' Q, and Tseng, B., "Low Power Transceiver and Coding for Wireless Endoscopy," 24th Southern Biomedical Engineering Conference, April 18 – 20, 2008, El Paso, TX.

5. Tseng, B., Huang, C.C., Ho, J. and Sohn, H., "Applying a Hybrid Data Mining Approach in Machining Operation", 2006 INFORMS Annual Conference, November 5-8, Pittsburg, PA.

6. Huang, C.C. and Tseng, B., "Business Intelligence: Analytical Knowledge Warehousing", 2006 INFORMS Annual Conference, November 5-8, Pittsburg, PA.

DISSERTATION/THESES SUPERVISED
Completed PhD Dissertation (as a primary co-advisor)
1. Rodriguez, Jorge I., Dissertation Title: Inkjet Based Personalized Screening Platform for Cancer Therapy, MASE Ph.D. Program, Completion Date: May, 2013.
2. Garza-Ulloa, Jorge, Dissertation Title: Assessment and Evaluation of the Dynamic Behavior of Muscles with Special Reference to Subjects with Diabetes Mellitus, ECE Ph.D. Program, Completion Date: May, 2013.

Completed MS Thesis (as a primary advisor)
1. Nadackal, Alexander, Thesis Title: Modeling Complex Manufacturing Process Activities Using Data Mining – A Rough Set Approach; Completion Date: May. 2007.
2. Konada, Venkata Sampat, Thesis Title: A Novel Approach to Predict Surface Roughness in Machining Operations Using Fuzzy Set Theory; Completion Date: May, 2007.
3. Kothi, Abhilash, Thesis Title: The Impact of Replenishment parameters and Information Sharing on Bullwhip Effect for Short Life Cycle Products; Completion Date: December 2007.
4. Astorga, Gabriel V, Thesis Title: A Hybrid Approach to Enhance Automotive Manufacturing Process Using QFD and VSM Techniques; Completion Date: May 2008.
5. Srikantaiah, Sanjay, Thesis Title: A Model of Lean – Sigma to Enhance a Manufacturing System through Integrating Lean Manufacturing and Six Sigma Approaches; Completion Date: Summer 2008.
6. Srikantaiah, Sanjay, Thesis Title: A Model of Lean – Sigma to Enhance a Manufacturing System through Integrating Lean Manufacturing and Six Sigma Approaches; Completion Date: Summer 2008.
7. Aleti, Kalyan R. Thesis Title: E-Quality Control – A Support Vector Machines Approach, Completion Date: December, 2008.
8. Cuevas, Alvaro S. Thesis Title: Using the Taguchi Design and Central Composite Design to Increase the Robustness of a Process from Its Raw Material Variability, Completion Date: May, 2009.
9. Kallur, Ravi L., MS; Tentative Thesis Title: Principle Component Analysis (PCA) in Automotive Industry; Completion Date: July 2009.
10. Kondamadugula, Ugandhar R; Tentative Thesis Title: Environmental Impact in Communities of Color Moncure Community Air Exposure Study Using Independent Component Analysis, Completion Date: December 2009.
11. Devaram, Prashanth, Thesis Title: E-Quality: Using Dimensional Index Values Towards Improving Classification Accuracy, Completion Date: Sept., 2010.
12. Chilukuri, Aditya, Thesis Title: Quality Assessment in Bone Scaffolds Through Internet Based Robotic Using Intelligent Data Mining, Completion Date: Nov., 2010.

13. Garcia, Carlos R., Thesis Title: Optimal Placement of Wind Turbines on Non-Flat Terrain Using Cluster Identification and Multi-Objective Genetic Algorithm, Completion Date: Dec., 2012.
14. Hu, Zhonghua, Thesis Title: Decision Rule Induction for Service Sector Using Data Mining - A Rough Set Theory Approach, Completion Date: Dec., 2012.
15. Koppella, Karthik V.M., Thesis Title: Critical Parts Retrieval and Profit Maximization for Medical Sustainability Using Design for Disassembly and Modularity, Completion Date: May, 2013.
16. Mendez, Juan V., Thesis Title: An Approach to Power Efficiency Determination in the Soalr Energy Systems Using Central Composite Design and Box-Behnken Design, Completion Date: July, 2013.
17. Gonzalez-Corrales, Maria V., Thesis Title: Implementing Design of Experiments (DOE) and the Taguchi Method to Enhance Robustness of the Bio-Printing Process, Completion Date: July, 2013.
18. Espino, Natalia, "Prediction of Foreign Object Debris/Damage (FOD) Type for Elimination in the Aeronautics Manufacturing Environment through Logistic Regression Model," December, 2013.
19. Romo, David, "Prediction of Foreign Object Debris/Damage (FOD) Type Based on Human Factors for Aeronautics Using Logistic Regression Model," December, 2013.

Articles Co-authored with Students (Students' Names in Bold)
1.Tseng, B., Kwon, Y. and **Devaram, P.**, "E-Quality: Using Dimensional Index Values for Improving Classification Accuracy," *Journal of Concurrent Engineering,* Vol. 20, No. 1, pp. 43-53, 2012.
2.Tseng, B., Chiou, R., Mandal, P., **Garcia, C**., **Espino, N., Hu, Z., Romo, D.** and **Corella, M**., "Cyber Based Layer Manufacturing with an On-line Testing System," *Proceedings of the American Society for Engineering Education 2013 Conference*, Atlanta, GA, June 23 - 26, 2013.
3. **Espino, N, Romo, D**., Tseng, B. and Pineda, R., "Novel Predictive Risk-Based Algorithm for Data-Driven Surveillance Frequency of Suppliers," *Proceedings of the Industrial Systems Engineering Research 2012 Conference*, San Juan, Puerto Rico, May 18 - May 22. 2013.
4.Tseng, B., **Zheng, J**, Fraser, K, Ho, J.C., Mendez1, J., **Espino, N**., Mandal1, P, Huang, C.C. and Chiou, R., "E-quality Control in Solar Panel Inspection Using Photometric Stereo Reconstruction and 3D Measurement, " *Proceedings of the Industrial Systems Engineering Research 2012 Conference*, San Juan, Puerto Rico, May 18 - May 22. 2013.
5. Tseng, B., Jiang, F., Huang, C.C., Chiou, R., Mandal, P., **Gonzalez, M., Koppella, K.V. and Saavedra, J**., "Quality Control of Bio Scaffold Using Intelligent Data Mining," *Proceedings of the Industrial Systems Engineering Research 2012 Conference*, Orlando, FL, May 19 - May 23. 2012.
6. Tseng, B, **Zheng, J, Mendez, V.J**., Mandal, P., **Koppella, K.V.,** Huang, C.C., Chiou, R., and **Garcia, C**, "E-quality Control in Solar Panel Inspection Using Photometric Stereo Reconstruction," *Proceedings of the Industrial Systems Engineering Research 2012 Conference*, Orlando, FL, May 19 - May 23. 2012.
7. **Bonham, P.R**. and Tseng, B., "E-Quality Manufacturing of Bio-parts Using Rough Set Theory," *Proceedings of the Industrial Systems Engineering Research 2012 Conference*, Orlando, FL, May 19 - May 23. 2012.
8. Tseng, B., Vargas-Hernandez, N., Chiou, R., Mandal, P., **Gonzalez, M**., **Mendez, J.V. and Saavedra, J.**, "Cyber Based Layer Manufacturing with Virtual Facility," *Proceedings of the 2012 ASEE Gulf-Southwest Annual Conference,* University of Texas, El Paso, TX, April 4-6, 2012.
9. Tseng, B., **Gonzalez, M**, Ho, J. C., **Gandara, P**., Huang, C.C., Chiou, R. and **Zheng, J.,** "E-Quality Control in Additive Manufacturing Using Support Vector Machines and Dimensional Index," *Proceedings of the Industrial Engineering Research 2011 Conference*, Reno, NV, May 21 - May 25. 2011.
10. Tseng, B., **Chilukuri, A., Gandara, P.,** Chiou, R., Ho, J. C., Huang, C.C., Zheng, J., "E-quality Assessment: Bio Part Inspection Using Intelligent Data Mining," *Proceedings of the Industrial Engineering Research 2011 Conference*, Reno, NV, May 21 - May 25. 2011.
11. **Devaram, P.**, Tseng, B., Ho, J.C., Huang, C.C. and Kwon, Y., "A Novel Approach to Improve Classification Accuracy Using Dimensional Index in Rapid Manufacturing," *Proceedings of the Industrial Engineering Research 2010 Conference*, Cajun, Mexico, June 6- June 9, 2010.
12. Tseng, B., **Hu, Z**. and Chiou, R., "Interactive Remote Control in Internet Based Manufacturing Through YAMAHA Robotic Systems with Webcam," *Proceedings of the 14th Annual International Conference on Industrial Engineering Theory, Applications and Practice*, Anaheim, CA, October 18-21, pp. 340 – 345, 2009.
13. **Cuevas1, A**., Tseng, B. and Estrada, F., "A Process Robustness Case Study Using Taguchi and Central Composite Design Approaches," *Proceedings of the 14th Annual International Conference on Industrial Engineering Theory, Applications and Practice*, Anaheim, CA, October 18-21, pp. 284 – 290, 2009.

14. Tseng, B., **Aleti, K**., Huang, C.C., Ho, J.C., Kwon, Y., Chiou, R. and Sohn, H. "E-Quality Control: A Support Vector Machines Approach," *Proceedings of the Industrial Engineering Research 2009 Conference*, Miami, FL, May 30 - June 3. 2009.

Honors and Awards to Supervised Students
1. **Muro, Karla**, an undergraduate research assistant has been awarded S-STEM NSF grant, in Jan., 2014.
2. **Baca Pamela**, an undergraduate research assistant has been awarded S-STEM NSF grant, in Jan., 2014.
3. **Huang**, **Yin**, an undergraduate research assistant has been awarded S-STEM NSF grant, in Jan., 2013.
4. **Alwarsetty**, **Yogitha**, a research assistant has awarded the Kalpana Chawla Memorial Scholarship in Spring, 2010.
5. **Alwarsetty**, **Yogitha**, a graduate assistant has awarded of the Drs. A. R. C. Sekaran and Uma Sekaran Graduate Fellowship in Industrial Engineering in 2010.
6. **Gonzalez**, **Maria**, an undergraduate research assistant has award the Outstanding Peer Mentor Award from Dept. of IMSE in Dec. 2010.
7. **Gonzalez**, **Maria**, an undergraduate research assistant has been nominated to compete the top ten senior award from the COE in Fall, 2010.
8. **Gandara**, **Paola**, NSF-LSAMP Scholarship, in July, 2009.
9. **Alwarsetty**, **Yogitha**, a research assistant has awarded Kalpana Chawla Memorial Scholarship in Spring, 2010.
10. **Aleti, Kalyan**, a research assistant has awarded a travel grant by Hispanic Engineer National Achievement Awards Corporation (HENAAC), the gateway for Hispanics in Science, Technology, Engineering and Mathematics (STEM) to attend their annual career fair in Houston on October 10-12 in 2008.
11. **Nadackal, Alexander**, has been invited to publish his thesis work entitled "Modeling Complex Manufacturing Process Activities Using Data Mining – A Rough Set Approach" in an International well know publisher, the German publishing house, VDM Verlag Dr. Müller Aktiengesellschaft & Co. KG, Dudweiler Landstr. 125 a D - 66123 Saarbrücken on 4/30/08.

TECHNICAL AFFILIATIONS

1.	Institute of Industrial Engineers (IIE)	Since 1995
2.	Society of Manufacturing Engineers (SME)	Since 2000
3.	American Association for Artificial Intelligence (AAAI).	2001 - 2004
4.	Society of Automotive Engineers (SAE)	2001 - 2004
5.	Kentucky Manufacturing Assistance Center (KMAC)	2002 - 2004
6.	INFORMS	2006 - 2007
7.	SPIE	2007 - Present

INVITED PRESENTATIONS
1. The Industrial Engineering Research 2008 Conference (Vancouver, British Columbia, Canada, May 17-21. 2008)
Topic 1: "Autonomous Decision Making in Customer Relationship Management: A Data Mining Approach"
Topic 2: "A Hybrid Approach to Supplier Selection through Rough Set Theory and Fuzzy Time Series Analysis"
2. The SPIE Optics East Conference 2007: Next-generation Photonic Sensor Technologies (Boston, MA, September, 2007)
Topic: "Network-based Production Quality Control"
3. The 2007 PACE Global Annual Forum (Technische Universität Darmstadt, Darmstadt, Germany, July 23 – 28, 2007)
Poster Title: Support of Product Life-Cycle Management (PLM) Related Course through Teamcenter Tool
Tzu-Liang (Bill) Tseng, Arnold Kim, Xiaobo Peng*, Enoch Wu, Udayvarun Konada
4. The Industrial Engineering Research 2007 Conference (Nashiville, TN, May 19-23. 2007)
Topic 1: "Modeling Complex Manufacturing Process Activities Using Data Mining Approach"
Topic 2: "A Hybrid Data Mining Approach to Manufacturing Quality Control Using Agent Based Mechanism"
Topic 3:"Medical Decision-Making: Autonomous Rule Induction from Data with Tolerances"
5. The 1st Bioinformatics Student Poster Session at UTEP (El Paso, TX, November 10, 2006)
Poster Title: Applying a Hybrid Data Mining Approach to Tumor Malignancy Prediction
Tzu-Liang (Bill) Tseng[*], Udayvarun Konada, Alexander Nadackal and Kalyan Aleti
6. 2006 INFORMS Annual Conference, November 5-8, Pittsburg, PA.
Topic 1: "Applying a Hybrid Data Mining Approach in Machining Operation"
Topic 2: "Business Intelligence: Analytical Knowledge Warehousing"

7. The 36th International Conference on Computers &Industrial Engineering, June 20-23, 2006, Taipei, Taiwan.
Topic 1: "Supply Chain Management: A Pull Type SC Model and Its Industrial Application"
Topic 2: "Annotation of Manufacturing Process Knowledge Using Semi-Structured Knowledge Model"
8. The Industrial Engineering Research 2006 Conference (Orlando, FL, May 20-24, 2006)
Topic 1: "Applying a Hybrid Data Mining Approach to Tumor Malignancy Prediction"
Topic 2: "Applying a Hybrid Data Mining Approach to Prediction Problems: A Case of Preferred Suppliers Prediction"
Topic 3: "An Agent-Based Knowledge Management System in a Heterogeneous Manufacturing Environment"
Topic 4: "Novel Approach to Design of a Centralized Data Communication Networks Using Degree-Constrained Minimum Spanning Tree"
Topic 5: "Integration of Ethernet-Image Sensor & Web-enabled SCARA Robot for Remote Quality Control"
9. The Industrial Engineering Research 2005 Conference (Atlanta, GA, May 14-18, 2005)
Topic 1: "Comparative Analysis between In-process CNC Touch Probe Gauging and Post-process CMM Inspection"
Topic 2: "Design Knowledge Externalization: A Case Study of Modular Deign of the Set Top Box"
Topic 3: "Applying Genetic Algorithm for the Development of the Components-based Embedded System"
10. Guest Speaker of FBI (El Paso, March 4, 2005)
Topic: "Crime Data Mining and Visualization." (with Wingyan Chung)
11. Guest Speaker of Department of Mechanical & Industrial Engineering at the University of Texas-El Paso (June, 7, 2004) "Feature-Based Rule Induction in Manufacturing Applications Using Rough Set Theory."
12. The Industrial Engineering Research 2004 Conference (Houston, Taxes, May 15-19, 2004)
Topic 1: "Quality Assurance in Machining Process Using Data Mining"
Topic 2: "OLAP: Modeling Qualitative Data Through Application of Multi-Dimensional Analysis Technique"
Topic 3: "Applying Data Mining Approaches for Defect Diagnosis in Manufacturing Industry"
13. Guest Speaker of Department of Industrial and Manufacturing Systems Engineering at the University of Michigan-Dearborn (April, 6, 2004) "Feature-Based Rule Induction in Manufacturing Applications Using Rough Set Theory."
14. The 2nd Kentucky Innovation and Enterprise Conference (KIEC) (Louisville, Kentucky, March 3, 2004) "Rough Set Based Decision Support System for Quality Control of Surface Roughness in Machining Process."
15. Guest Speaker of Information Management Dept. at the National Chi Nan University (Nantou, Taiwan, December 26, 2003) "Data Mining-Application of Rough Set Theory."
16. The 8th Annual International Conference on Industrial Engineering Theory, Applications & Practice (Las Vegas, Nevada- Nov 10-12, 2003)
Topic 1: "Novel Approach To Multi-Functional Virtual Team Formation For Product Design"
Topic 2: "Intelligent Modular Product Design: Knowledge Management With Web Services"
17. The 1st Kentucky Innovation and Enterprise Conference (KIEC) (Lexington, Kentucky, March 5, 2003)
Topic 1: "Rough Set Based Decision Support System for Quality Control of Surface Roughness in Machining Process" (NSF-EPSCoR Project)
Topic 2: "Applying Data Mining and Fuzzy Mathematical Approaches to Control Surface Roughness with Changing Process Conditions in Metal Cutting" (KSEF Project)
18. The 31st International Conference on Computer & Industrial Engineering (San Francisco, CA, February 2-4, 2003) "Using Rough Set Theory for Fault Location on Distribution Feeder"
19. The INFORMS Annual Meeting (San Jose, CA, Nov. 17 – 20, 2002) ""A Data Envelopment Analysis (DEA) Model for Supply Chain Management." (with Roger R. Gung)
20. The 6th World Multiconference on Systemics, Cybernetics and Informatics (SCI) Conference (Orlando, Florida, July 14-18, 2002)
Topic 1: "The Agent-Based Collaboration Information System for Supply Chain Management"
Topic 2: "Development of Corporate Memory for Analytical Knowledge"
21. Guest Speaker of Industrial Engineering and Engineering Management Dept. at the National Tsing Hua University (Hsinchu, Taiwan, July 20, 2001) "Rough Set Theory: A Data Mining Tool for Semiconductor Manufacturing."
22. Chinese Institute of Decision Sciences Conference (Taipei, Taiwan, June 30, 2001) "Information Requirements Determination in Decision Making: The Issues-Oriented Approach."

23. Modeling and Analysis of Manufacturing Engineering Workshop at the National Chi Nan University (2001, Nantou, Taiwan, June 21, 2001) "Development and Implementation of Knowledge Warehouse in Manufacturing Systems."

24. 1st UI-Wide Research Forum (Iowa City, Iowa, April 5, 1999) "Rough Set Applications: Preference-Based Rule Induction."

FUNDED GRANT PROPOSALS (2000 - 2013)

1."Investigation and Testing of Direct Manufacturing Technology for Aerospace Tooling" project, Lockheed Martin Corporation (LMC) (12/20/13-5/31/15). (PI), Grant Total/Duration: $**330,000**/year.

2."Analysis of Direct Labor Incentives and Conclusions on Attributes of Successful Incentive Programs" project, Lockheed Martin Corporation (LMC) (1/15/14-5/15/14). (Co-PI with PI Eric Smith), Grant Total/Duration: $**79,961**/year.

3."Development and Enhancement of Green Energy Learning for Effective Engineering Education,"project**,** DoEd-MSEIP (10/1/13 – 9/30/16), (PI), Grant Total/Duration: $ **900,000**/ 3 years

4. "Strategic Plan and Market Analysis Gamma Engineering" project, Lockheed Martin Corporation (LMC) (1/1/14-12/31/15). (PI), Grant Total/Duration: **$165,866**/2 years.

5."Foreign Object Debris (FOD) Elimination" project, Lockheed Martin Corporation (LMC) (10/1/13-5/31/14). (PI), Grant Total/Duration: **$143,285**/year.

6. Texas Manufacturing Assistance Center (TMAC) sub-receipt agreement, UTA-NIST, (PI), Grant Total/Duration: **$1,491,000**/year.

7."Automated Data Reporting"project, Lockheed Martin Corporation (LMC) (6/1/13-12/31/13). (PI), Grant Total/Duration: **$70,000**/year.

8. "Fusing Rapid Manufacturing with 3D-Virtual Facility and Cyber Tutor System into Engineering Education to Cultivate Technical Success," project, NSF-TUES Type I (7/1/13 – 6/30/15) (PI) Grant Total/Duration: **$200,000**/ 2 years

9. "Fusing Renewable Energy into Manufacturing Engineering" project, DoEd-DHSIP (10/1/12-9/30/17). (PI, Funded) Grant Total/Duration: **$ 2,500,000**/ 5 years

10."Preditive Quality Algorithm," project, Lockheed Martin Corporation (LMC) (3/1/12-2/28/13). (PI) Grant Total/Duration: **$172,026**/year.

11. "Development and Evaluation of e-Based Bio-Manufacturing Laboratory for Engineering Education " project, DoEd-FIPSE (10/1/08-9/30/13). (PI), Grant Total/Duration: **$ 637,810**/ 4 years

12."Engineering Education and Laboratory Enhancement: Leading Virtual Manufacturing to Reach Reality through Network Based Manufacturing" project, NSF-CCLI (5/1/2008-4/30/2010). (PI)
 Grant Total/Duration: **$150,000**/2 years

13. "Ethical Leadership: Applied Decision & Ethical Theories" project, NASA-NAFP (9/1/07-12/31/08). (Co-PI, Funded) Grant Total/Duration: $50,000/ 1 year

14. "Video Conference Units for Remote Collaboration on the 2006-2007 PACE Next Generation Global Vehicle Project," PACE Program (GM) (4/1/07-3/31/08). (PI)
Grant Total/Duration: $12,000 (cash) plus $2,500 matching fund from COE/ year

15. "Enhancement in Online Laboratory Learning" project, DoEd-FIPSE (1/1/07-12/31/09). (UTEP-PI)
Grant Total/Duration: **$ 412,000**/ 3 years (Drexel University: $292,000; UTEP: $120,000)

16. "Network-Based Manufacturing" project, PACE/Hewlett Packard Desktop/Large-Format Desktop Printer Grant (GM) (4/1/06-3/31/07) (Co-PI with PI Rong Pan)
Grant Total/Duration: 6 HP PCs and 1 large-format desktop printer (equivalent to $65,000 of market value) / year

17. "Support of Product Life-Cycle Management (PLM) Related Courses, Student Design Competitions, Workshops and Seminars through a Virtual Environment among PACE Institutions" project, PACE Program (GM) (4/1/06-3/31/07). (PI)
Grant Total/Duration: $7,000 (cash) plus 3 HP PCs (equivalent to $30,000 of market value) / year

18. "Fabricating Environmentally Conscious (Benign) Manufacturing into Engineering Education" project, DoEd-MSEIP (9/1/05-8/31/08). (PI)
Grant Total/Duration: **$314,867**/ 3 years

19. "Applying Novel Data Mining Approach for Fault Diagnosis of Electronic Component in Manufacturing Industry" project, RUI program 2005 at UTEP. (PI)
Grant Total/Duration: $3,550/ year

20. "A Study on Applying Data Mining to Fault Prognosis and Diagnosis in Electronic Component in Manufacturing Industry" project, WKU Summer Fellowship, 2003. (PI)
Grant Total/Duration: $5,000/year
21. "Applying Data Mining and Fuzzy Mathematical Approaches to Control Surface Roughness with Changing Process Conditions in Metal Cutting" project, Kentucky Science and Engineering Foundation (KSEF) 2002 Program (1/1/03-12/31/03). (PI)
Grant Total/Duration: $14,362/year
22. "Rough Set Based Decision Support Systems for Quality Control of Surface Roughness in Machining Process" project," NSF EPSCoR 2002 (REG) Program (6/1/02-5/31/04). (PI)
Grant Total/Duration: $31,676/ 2 years
23. "Acquisition of Manufacturing Systems for Quality Assurance in Precision Machining Processes Using Data Mining," for the NSF (MRI/RUI; 8/15/01- 7/31/04). (PI)
Grant Total/Duration: **$340,000** (NSF: $268,426/WKU match: $81,574) / 3 years
24. "Project Assignment Management System (PAMS)" project, funded by the AMSI/WKU (8/1/01-12/31/01). (PI)
Grant Total/Duration: $6,000/5 months
25. "Development of an e-Based Decision Support System for Modular Product Design in the Automotive Industry," WKU Junior Faculty Scholarship (2/27/01-2/26/02). (PI)
Grant Total/Duration: $4,000/ 1 year
26. Development of the 6 Sigma and Project Management Training Program project for the Tyco Inc. Franklin, Kentucky (Co-PI with PI, Dr. Murat Tiryakioglu) (6/1/00-9/30/00).
Grant Total/Duration: $30,000/4 months

LABORATORY DEVELOPMENT ACTIVITY
1. Developed an Intelligent Systems Engineering Laboratory (ISEL) at UTEP (Supported by GM-PACE, NSF, DoEd, LMC Grants) (http://research.utep.edu/nbml)
2. Developed an e-Manufacturing Laboratory at WKU (Supported by IBM Scholars Program, NSF-EPSCoR and KSEF Grants)
3. Developed an Precision Machining and Metrology Laboratory (PMML) (Supported by NSF-MRI Grant)

HONORS AND AWARDS
1. 2013 University Research Awards, University of Texas at El Paso
2. The Best Paper Award: Real-time Stereoscopic 3D for E-Robotics Learning (The 14th World Multiconference on Systemics, Cybernetics and Informatics, Orlando, FL, 6/29-7/2, 2010)
3. The Best Paper Award: Enhancement of Online Robotics Learning Using Real-Time 3D Visualization Technology (The International Symposium on Engineering Education and Educational Technologies, Orlando, FL, July 10 - 13, 2009)
4. 2009 University Research Awards, University of Texas at El Paso
5. 2008 Best Paper Award: Minimizing the Normalized Sum of Square for Workload Deviations on Identical Parallel Machines (The 44th Southeastern INFORMS Annual Meeting, Myrtle Beach, South Carolina, Oct. 2-3, 2008)
6. 2006-2007 Who's Who in America (Marquis Who's Who)
7. 2006 AcademicKeys: Who's Who in Engineering Education (WWEE)
8. 2005-2006 Who's Who in America (Marquis Who's Who)
9. 2002-2004 University Senate, WKU
10. 2003 Faculty Fellowship, WKU
11. 2002 Best section paper: The Agent-Based Collaboration Information System for Supply Chain Management (The 6th World Multiconference on Systemics, Cybernetics and Informatics (SCI) Conference, Orlando, Florida, July 14-18, 2002)
12. 2001 Junior Faculty Scholarship, WKU
13. 1997 Outstanding Teaching Assistant, Industrial Engineering Department, The University of Iowa
14. 1996 Alpha Pi Mu, The University of Iowa Chapter
15. 1989 The Distinguished Reserve Officer of Ministry of National Defense of R. O. C.

EDITORIAL AND PROFESSIONAL ACTIVITIES
- The Editor of *Journal of Computer Standards & Interfaces* (CSI)

- Editor Board of *International Journal of Data Mining, Modeling and Management* (JDMMM)
- Editor Board of *American Journal of Industrial and Business Management* (AJIBM)
- Referee for *IIE Transactions*, *IEEE Transactions*, etc.

PUBLIC SERVICE
1. NSF – CMMI Grantee Conference Panel Review, University of Tennessee – Knoxville, 11/12/07.
2. NSF - CMMI Panel Review, Arlington, Washington DC, 5/13/08.
3. NSF – CCLI Panel Review, Crystal City, Washington DC, 7/10/08 – 7/11/08.
4. NSF – CCLI Type I , Panel Review, Crystal City, Washington DC, 7/13/09 – 7/14/09.

COLLABORATORS
Dr. Chen-Fu Chien, Distinguished Professor, Department of Industrial Engineering and Engineering Management, National Tsing Hua University, Taiwan.
Dr. Yeu-Shiang Huang, Professor and Chair, Department of Industrial and Information Management, National Cheng Kung University, Taiwan.
Dr. Chun-Che Huang, Professor, Department of Information Management, National Chi Nan University, Taiwan.
Dr. Frank Chen, Lutcher Brown Distinguished Chair in Advanced Manufacturing, Mechanical Engineering, Department, Director, Center for Advanced Manufacturing & Lean Systems, The University of Texas at San Antonio, TX.
Dr. Roger R. Gung, Senior Manager, Business Analytics & Optimization, University of Phoenix.
Dr. David He, Professor, Department of Mechanical Engineering, Univ. of Illinois at Chicago, IL.
Dr. Jack Feng, Associate Dean, Caterpillar University, Caterpillar Inc. Peoria, Illinois.
Dr. M.C. Jothishankar, Senior Industrial Engineer, Advanced Manufacturing Technology group at the Rockwell Collins Inc., Cedar Rapids, IA.
*Dr. Andrew Kusiak, Dept. Head and Professor, Department of Mechanical and Industrial Engineering, Univ. of Iowa, IA. (Dr. Kusiak serves on the editorial boards of 40 journals, edits book series, and is the Editor-in-Chief of the *Journal of Intelligent Manufacturing*)
Dr. Teresa Wu, Associate Professor of Industrial Engineering, School of Computing, Informatics, Decision Systems Engineering, Arizona State University and Associate Professor of Radiology Informatics, Mayo Clinic College of Medicine, AZ.
Dr. Rong Pan, Associate Professor of Industrial Engineering, School of Computing, Informatics, Decision Systems Engineering, Arizona State University
Dr. Yongjin Kown, Associate Dean, College of Engineering and Head of Department of Industrial Engineering Ajou University, Suwon , South Korea.
Dr. M.K. Jeong, Associate Professor, Department of Industrial & Information Engr., Rutgers University, NJ.
Dr. Shinyi Wu, Assistant Professor, Daniel J. Epstein Department of Industrial and Systems Engineering University of Southern California, LA, CA.
Dr. Ryan Wicker, Professor, Dept. of Mechanical Engineering, Director of the W.M. Keck Center, University of Texas at El Paso.

CURRENT AND PAST UNDERGRADUATE/GRADUATE STUDENT
Current
Ph.D. Student: Juan A. Saavedra (ECE program-ISE track), Mohammod Bhuyan (ESE program–energy track), Stuart Cheung (ESE program), Diane N. De Hoyos (MASE program-manufacturing track), Zhonghua Hu (ECE program-ISE Track), Maria V. Gonzalez Corrales (Bio-Medical Engineering), Aditya Akundi (ECE program-ISE Track with Dr. Eric Smith), Daniel Reyna (Bio-Medical Engineering), Wenqing Sun (ECE program with Dr. Wei Qian)

M.S. Thesis Student: Jun Zheng, Natalia Espino, David Romo, Jose J. Lafon, Cristian Lopez, Gabriela Ituarte Villarreal, Donna Alhakeem (with Dr. Paras Mandal)

Undergraduate Research Student: Pamela V. Martinez, Pamela Baca and Karla Muro

Past
Ph.D. Student: Jorge Garza-Ulloa (ECE Dept), Jorge Rodriguez (MASE-Bio Medical Track)

M.S. Thesis Student:
Maria V. Gonzalez, Juan Venegas Mendez, Zhonghua Hu, Carlos Garcia Rosales, Karthik Varma M. Koppella, Prashanth Devaram, Aditya Chilukuri, Alvaro Cuevas Salcido, Ravi L. Kallur, Ugandhar Kondamadugula, , Yingjun Zhu, , Kalyan R. Aleti, Kothi, Abhilash R., Gabriel V. Astogra., Sanjay Srikantaiah, Venkata Sampat U Konada and Alexander J. Nadackal

CITIZENSHIP
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