**Kambiz Farahmand, PhD, PE**

Currently is a Professor and interim chair of Industrial and Manufacturing Engineering Department at North Dakota State University, where he also served as the Department Head from 2005 to 2011. He is an internationally recognized expert in Productivity Improvement. He has published over 110+ refereed papers in addition to 40+ technical papers, has over $5.7 million in research, and is a recipient of numerous awards. He just published the 3rd edition of his “Workstation Design” and the second edition of his “Evaluation of Engineering Data” textbooks. As an Industrial engineer/consultant for the past fifteen years with quality systems such as Malcolm Baldrige and Toyota Production system, Dr. Farahmand has worked with quality award recipients such as Delphi Mexico, Delco Electronics, and TI Automotive in receiving the Shingo prize and Caterpillar and TI Instrument receiving Baldrige national awards.

Dr. Farahmand has been involved in joint research and consulting with DOE, ARMY, NAVY, NASA, VHA, and industry.  Most recent research areas include healthcare system redesign for VA involving Clinical Space Optimization, LEAN implementation and Reusable medical equipment reprocessing, portable life support systems for NASA astronauts’ space ensemble and adverse environment protecting garment, thermal and respiratory physiology, cooling systems, hypothermia, and respiratory heat and mass transfer for NAVY. He has also served as subject matter expert in Lean Manufacturing, Quality Control and ISO 9001, ISO 14001, AS9100, and OHSAS 18001implementation and certification of US Army command.  He was the invited Key Note Speaker addressing ISO CAPA in Medical Research at the U.S. Army Medical Research and Materiel Command, Institute of Surgical Research, Fort Sam Houston, Texas. He is a registered professional engineer in the states of Texas and North Dakota and past president of IIE Coastal Bend Chapter.

**Research and Other Information**

Ergonomics Design, Healthcare, Facilities and Production Layout - Planning & Management, Human Exposure and Physiology Simulation, ISO 9001-Quality Management System, AS9110-Aerospace Maintenance Standards, ISO 18001–Occupational Health and Safety Management Systems Standards, Productivity Analysis & Waste Management, Respiratory& Life Support System, Lean Manufacturing, Safety and Human Factors Engineering, Manufacturing Systems, Simulation & Modeling, Operations & Materials Management and Strategic Planning, Computer Network Management.

**Professional Certification/Management Training**

* ISO 9001:2015 Quality Management System
* AS 9110A Aerospace Maintenance Management System LA Certification
* OHSMS 18001:2007 Occupational Health & Safety Management System Certification
* ISO 14001:2004 Environmental Management System LA Certification
* ISO 9001:2008 Quality Management System LA Certification
* Professional Mid-Management Administrator Training
* ISO 9000:2004 Quality Management System LA Certification
* American Society of Quality LEAN Manufacturing Training
* Western Petroleum Services Research & Development Simulation Design Training
* Western Petroleum Services Research & Development Fracturing Design Training
* Western Petroleum Services Research & Development Cementing Design Training

**Textbooks**

1. Ergonomic Workstation Design, 3rd Edition, Farahmand, Linus Publishing, ISBN 13: 978-1-60797-035-4, 2019.
2. Evaluation of Engineering Data, 2nd Edition, Farahmand, Linus Publishing, ISBN 10: 1-60797-925-X, ISBN 13: 978-1-60797-925-8, 2022.
3. Evaluation of Engineering Data, 1st Edition, Farahmand, Linus Publishing, ISBN 10: 1-60797-925-X, ISBN 13: 978-1-60797-925-8, 2022.
4. Ergonomic Workstation Design, 2nd Edition, Farahmand, Linus Publishing, ISBN 13: 978-1-60797-828-2, 2019.
5. Ergonomic Workstation Design, 1st Edition, Farahmand, Linus Publishing, N.Y., ISBN 13: 978-1-60797-828-2, 2018.

**Selected** **Publications**

1. Roth, K. & Farahmand, K. A Socio-Technical Study of Industry 4.0 and SMEs: Recent Insights from the Upper Midwest. Sustainability, 15 (16), 2023, 12559. https://doi.org/10.3390/su151612559
2. Roth, K., & Farahmand, K. A Study of Current Socio-Technical Design Practices in the Industry 4.0 Context among Small, Medium, and Large Manufacturers in Minnesota and North Dakota. Sustainability, 15(23), 16438, 2023. https://doi.org/10.3390/su152316438
3. Farahmand, K. Mahmoud, M., Wadhwa, S. S. Risk-based decision-making process in the context of Quality Management System – A case study of a startup company. International Journal of Industrial Engineering & Technology (IJIET). December 2020.
4. Wadhwa, S. S., Farahmand, K., Vachal, K., A Deterministic Mathematical Model to Support Future Investment Decisions for Developing Inland Container Depots, Research in Transportation Economics Journal, Manuscript Number RETREC\_2019\_88.
5. Dharmadhikari, N., Farahmand, K. Piling Centers Location Optimization for Sugar Beets under Supply Variation. Infrastructure, infrastructures-470667, March 2019.
6. Mahmoud, M., Farahmand, K. Risk-based decision-making process in the context of Quality Management System. International Journal of Industrial Engineering & Technology (IJIET). March 2019.
7. Mahmoud, M., Farahmand, K. ISO 9001: 2015 Quality Manual Template for Service Industry. International Journal of Industrial Engineering & Technology (IJIET), ISSN (P): 2277-4769 ISSN(E): 2278-9456, Vol. 9, Issue 1, Jun 2019 1-20.
8. Dharmadhikri, N., Farahmand, K. Location Allocation of Sugar Beet Piling Centers using GIS and Optimization (vol. 2, pp. 17). Infrastructures. https://doi.org/10.3390/infrastructures4020017
9. Wadhwa, S. S., Farahmand, K. Site Selection Using Multi Attribute Decision Analysis in GIS - A Case Study on Brownfields of Minnesota. International Journal of Engineering Research and Innovation (IJERI). July 2018.
10. Farahmand, K., Wadhwa, S. S. Optimization of Surgical Referrals to Minimize Cost. Journal of Translational Medicine & Research. May 2018. http://medcraveonline.com/OAJTMR/volume\_issues?issueId=2170&volumeId=542
11. Li, X., Bilen-Green, C., Farahmand, K., Langley, L. (2018). A semiparametric method for estimating the progression of cognitive decline in dementia. ***IIE Transactions on Healthcare Systems Engineering***. ID is UHSE-2017-0018.R1. https://www.tandfonline.com/doi/abs/10.1080/24725579.2018.1455247.
12. Dharmadhikari, N., Farahmand, K., Lee, E., Vachal, K., Ripplinger, D. (2017). Yield Forecasting to Sustain the Agricultural Transportation under Stochastic Environment. ***International Journal of Research in Engineering and Science (IJRES)***. 05.08 (2017): 51- 60.
13. Farahmand, K. Xiaoxia L., (2017) Using Simulation to Justify Lean Implementation in Manufacturing, A Case Study. ***Journal of Multidisciplinary Engineering Science and Technology***. May 2017.
14. Farahmand, K., Dharmadhikari, N. (2017). Green Agriculture. ***Proceedings of the 12th International Green Energy Conference***, July 31-August 3, 2017, July 31 – August 3, 2017, Anchorage, Xi’an, Shaanxi, China.
15. Farahmand K, You G., Shi, J., Wadhwa S (2016) Data Mining for Predicting Pre-diabetes: Comparing Two Approaches. ***International Journal of User-Driven Healthcare***, July-December 2016, Vol. 5, No. 2. IGI Global Publishing.
16. Farahmand, K., Shi, J. (2016). Energy Utilization for Efficient Manufacturing. ***Proceedings of the 11th International Green Energy Conference***, May 8-11, 2016, Anchorage, Alaska, USA.
17. Lu, C., Shi, J., Farahmand, K., Erdem, E. (2016). Stochastic Optimization of Price-Based Unit Commitment with Consideration of Emission Allowance. ***Proceedings of the 11th International Green Energy Conference***, May 8-11, 2016, Anchorage, Alaska, USA.
18. Farahmand K, Wadhwa S, Mostafa M, Khiabani VH (2016) Selecting Environments for Distribution of Services**. Health Care: Current Reviews 2016**. <http://dx.doi.org/10.4172/2375-4273.1000159> .
19. Farahmand, K., Wadhwa, S. S., Mostafa, M., Khiabani, V., Woodbridge, P., Lumby, C. (2016). Management Decision Making Tool. ***Health Environments Research & Design Journal (HERD)***. Sage Publication. 2016.
20. Singh, S., Farahmand, K. (2016). Cost Optimization for Patient Referral, Department of Veterans Affairs, Veteran Health Administration, Poster Presentation. ***ND EPSCoR/IDeA, 2016 State Conference***, Alerus Center, Grand Forks, ND. April 19, 2016.
21. Farahmand, K., Wadhwa, S. S., Walmsley, M., Mostafa, M., Khiabani, V. (2015). Primary Care Clinic Visit Efficiency. ***International Journal of User-Driven Healthcare (IJUDH)***. January-March 2015, Vol. 5, No. 1, 16-29.
22. Farahmand, K., Wadhwa, S. S., Mostafa, M. (2015). Integrating Animation into Teaching Computer Simulation. ***International Journal of Research in Educational Methodology (IJEM)***, Bio-Numeric, 2015. http://www.igiglobal , com/journal/international-journal-user-driven-healthcare/41022.
23. Farahmand, K., Mostafa, M., Wadhwa, S. S., Upadhyaya, S., Khiabani, V. (2015). Cost Optimization for Patient Referrals. ***6th International Conference on Applied Human Factors and Ergonomics (AHFE 2015) and the Affiliated Conferences, AHFE 2015***. July 26-30.
24. Farahmand, K., Mostafa, M., Wadhwa, S. S., Upadhyaya, S., Khiabani, V. (2015). Providing Access to Rural patients - A Management Decision. ***American Research Journals (ARJ)***, Vol. 1, Issue 1, June 2015. <http://www.arjonline.org/papers/arjms/v1-i1/5.pdf>
25. Farahmand, K., Upadhyaya, S., Wadhwa, S. S., Mostafa, M., Khiabani, V. (2015). Referral Patient Data Clustering for Simulation. ***International Journal of Engineering Science and Innovative Technology (IJESIT)***. Volume 1, Issue 2, ISSN: 2319-5967, March 2015.
26. Shi, J., Farahmand, K. (2015) Evaluation of Prosthetics Purchasing Process at VA Hospitals. ***2015 Industrial & Systems Engineering Research Conference***. Paper ID: I1190. May 30-June 2, 2015, Nashville, TN.
27. Hamidi, M., Parker, T. R., Farahmand, K. (2015). A Case Study: Redesigning the Organizational Structure of a Project-Driven Company. ***Technology Interface International Journal (TIIJ)***. March 2015.
28. Farahmand, K., Khiabani, V., Ma, Y. (2014). Andon Interface for Healthcare Triage, ***Journal of Emerging Trends in Computing and information Sciences***. ISSN: 2070-8407, Vol. 5, No. 12, December 2014.
29. Hamidi, M., Parker, T. R., Farahmand, K. (2014). A Case Study: Redesigning the Organizational Structure of a Project-Driven Company. ***Proceedings of the 2014 IAJC-ISAM International Conference***, Orlando, FL, USA, September 25-27.
30. Khiabani, V., Erdem, E., Farahmand, K. Nygard, K. E. (2014). Smart Grid PMU Allocation Using Genetic Algorithm. ***Journal of Network and Innovative Computing (JNIC)***, Volume 2, July 2014. <http://www.mirlabs.net/jnic/>
31. Afsharinia, A., Bagherpour, M., Farahmand, K. (2014). Efficiency Measurement of Clinical Units, Using Integrated Independent Component Analysis - DEA Model under Fuzzy Condition. ***International Journal of Hospital Research (IJHR)***. June 2014. <http://ijhr.iums.ac.ir/article_5343_0.html>
32. Shi, J., Erdem, E., Peng, Y., Farahmand, K., Woodbridge, P. (2014) Effect of Notifying Expected Waiting Time on Telephone System Performance. ***IIE Annual Conference & Expo 2014***, ISERC session 1282. May 31-June3. Montreal, Canada.
33. Upadhyaya, S., Doetkott, C., Magel, R., Farahmand, K. (2014) Comparison of Classification Probabilities among Logistic Regression, Neural Network and Support Vector Machines in the Presence of Missing Data. ***Red River Valley conference***. 25th April, Fargo, ND.
34. Dharmadhikari, N., Farahmand, K., Lee, E. (2014) Yield Forecasting to Sustain the Agricultural Transportation under Stochastic Environment. ***55th Annual Transportation Research Forum***, March 13-15, San Jose Ca.
35. Farahmand, K., Khiabani, V., Ma, Y. (2014). Implementing Andon in Healthcare Deliver. ***2014 Healthcare Systems Process Improvement Conference***. ID # 130, Orlando, Florida, USA. February 21-24, 2014.
36. Farahmand, K., Tripathi, P. (2014) Dynamic Pricing in Supply Chain.***International Journal of Business Development and Research***. Vol.1, Issue 2, ISSN: 2286-6213, January 2014.
37. Hamidi, M., Farahmand, K., Sajjadi, R. S., Nygard, K. E. (2014). A heuristic algorithm for a multi-product four-layer capacitated location-routing problem. ***International Journal of Industrial Engineering Computations***. Vol. 5. Issue 1.<http://growingscience.com/beta/journal/ijiec/volume/5/issue/1>
38. Lee, E., Oduor, P.G., Farahmand, K. (2014). A Coupled Linear Programming Model with Geospatial Dynamic Trip Assignment for Global-Scale Intermodal Transportation. ***Maritime Economics & Logistics***. 16, 33–54. doi:10.1057/mel.2013.22;
39. Hamidi, M. Farahmand, K. Sajjadi, S.R. Nygard, K.E. (2014) A Heuristic Algorithm for a Multi-Product Four-Layer Capacitated Location-Routing Problem. ***International Journal of Industrial Engineering Computations (IJIEC)***. Vol. 5, Issue 1.<http://growingscience.com/beta/journal/ijiec/volume/5/issue/1>
40. Farahmand, K. Khiabani, V., Dharmadhikari, N.  (2013). Economic Model Evaluation of Largest Sugar-beet Production in U.S. States of North Dakota and Minnesota***. International Journal of Research in Engineering and Science (IJRES)***.  August 2013, pp: 11-24.
41. Farahmand, K., Dharmadhikari, N., and Khiabani, V. (2013). Analysis of Transportation Economics of Sugar-beet Production in the Red River Valley of North Dakota and Minnesota using Geographical Information System. ***Journal of Renewable Agriculture***. 1(7), 126-131, 2013.
42. Farahmand, K., Srinivasan, R. (2013). Anthropometric Data Collection in the Human Nasal and Oral cavity. ***Global Journal of Medical Research for publication*** (GJMR). Volume 13, Issue 2, Version 1.0.
43. Lee, E., Farahmand, K. (2013). Simulation of Port Disruption and Transportation Resources for U.S. Containerized Imports. ***Management Review: An International Journal***. Volume 8, Number 1, summer 2013, PP4-37.
44. Farahmand, K., Khiabani, V., Ma, Y. (2014). Implementing Andon in Healthcare Delivery. ***Department of Veterans Affairs: Technical Report***. October 21, 2013.
45. Hamidi, M. Farahmand, K. Sajjadi, S.R. Nygard, K.E. (2013) A Heuristic Algorithm for a Multi-Product Four-Layer Capacitated Location-Routing Problem. ***International Journal of Industrial Engineering Computations (IJIEC)***. 2013.
46. Upadhyaya, S., Farahmand, K., Baker-Demaray, T., Klug, M. G. (2013). Comparison of NN and LR Classifiers in the Context of Screening Native American Elders with Diabetes. ***International Journal of Expert Systems with Applications***. 40 (2013) 5830–5838, .July 2013.
47. Lee, E. & Farahmand, K. (2013) “Simulation of a Base Stock Inventory Management System Integrated with Transportation Strategies of a Logistic Network,” ***Journal of Civil Engineering and Architecture*** 7(5), pp.633-644.
48. Lee, E., Farahmand, K. (2013). Simulation of Shipping Size Effects for Transportation and Oder Quantity in a Supply Chain. ***Journal of Civil Engineering and Architecture***. Volume 7. Number 5. May 2013 (Serial Number 66), PP 633.
49. Khiabani, V., Farahmand, K. (2013). Max. Covering Phasor Measurement Units Placement for Partial Power System Observability. ***Engineering Management Research.*** Vol. 2, No. 1, May 2013.
50. Khiabani, V., Hamidi, M., Farahmand, K., Aghatehrani, R. (2013). A Goal Programming Approach for Optimal PMU Placement. ***International Review on Modeling and Simulations (I.RE.MO.S.)***, April 2013.
51. Khiabani, V., Hamidi, M., Farahmand, K., Aghatehrani, R. (2013). A Goal Programming Approach for Optimal PMU Placement. ***International Review on Modeling and Simulations,***April 2013.
52. Farahmand, K., Victorino Marquez, G. J., Khiabani, V. (2013). Manufacturing the 7000 Gear Train Mechanical Assembly. ***International Journal of Engineering and Technology***, Vol., No. 3. March 2013. 288-312.
53. Dharmadhikari, N., Farahmand, K., Khiabani, V. (2013). Optimizing Sugar-beet Piling Center Locations under Supply Variation. ***93rdAnnula Meeting of Transportation Research Forum***. Annapolis, MD, March 21-23, 2013.  
    Khiabani, V., Farahmand, K., Dharmadhikari, N.  (2013). Economic Model Evaluation of Sugar-beet Production in Red River Valley, ***INFORMS***, October 6-9, 2013, Minneapolis, MN.
54. Dharmadhikari, N., Farahmand, K., Khiabani, V. (2013). Analysis of Transportation Economics of Sugar-beet in the Red River Valley of ND and MN using GIS, ***INFORMS***, October 6-9, 2013, Minneapolis, MN.
55. Khiabani, V., Aghatehrani, Sunedison. R., Farahmand, Roudaki. A. (2013). Economic Model Evaluation of Sugar-beet Production in Red River Valley, ***INFORMS***, October 6-9, 2013, Minneapolis, MN.
56. Khiabani, V., Ergin, E., Farahmand, K., Kendall, N. (2013). Genetic Algorithm for Instrument Placement in Smart Grid. ***5th World Congress on Nature and biologically inspired computing (NaBIC)***, Fargo, USA, August 12-14, 2013, pp: 213-218.
57. 43. Khiabani, V., Ergin, E., Farahmand, K., Kendall, N. (2013). Genetic Algorithm for Instrument Placement in Smart Grid. 5th World Congress on Nature and biologically inspired computing (NaBIC), Fargo, USA, August 12-14, 2013, pp: 213-218.
58. 44. Gonela, V., Zhang, J., Osmani, A., Awudu, I., Farahmand, K., Shi, J. (2013). Designing Effective and Efficient Scheduling Policy to Improve Laboratory Performance. Proceedings of the 2013 Industrial and Systems Engineering Research Conference. A. Krishnamurthy and W.K.V. Chan, eds.
59. 45. Zhang, J., Farahmand, K., Osmani, A., Iddrisu, A., Gonila, V., Measuring Scheduling Effectiveness in VHA, Department of Veterans Affairs: Technical Report. August 22, 2012.
60. 38.    Farahmand K, Karim R, and Srinivasan R. Floyd K. (2012). Inpatient Room Modeling, Health Services Research and Development Service (HSR&D) and Quality Enhancement Research Initiative ([QUERI](http://www.queri.research.va.gov/)) National Conference. Transforming Veterans Healthcare through Partner-Oriented Research. Gaylord National Convention Center. Washington, DC, July 15–18, 2012.
61. 39.    Farahmand, K., Lee, E., “Application of Signal Detection Theory to Ascertain Risk While Driving in a Flooded Urban Area", Journal of Civil Engineering and Architecture, JCEA-E 20110527-2, 2012.
62. Lee, E., Farahmand, K., Oduor, P., “Simplistic Geospatial Techniques in Analyzing Transportation Dynamics for Origin-Destination Container Movement Routes in the United States”, ***Journal of Transportation Systems Engineering and Information Technology***, V.12, Issue 1, p. 79-90, February 2012.
63. Lee, E., Farahmand, K., Oduor, P. (2012). Application of Signal Detection Theory to Ascertain Risk While Driving in a Flooded Urban Area. ***Journal of Civil Engineering and Architecture***. JCEA-E 20110527-2.
64. Hamidi, M., Farahmand, K., Sajjadi, R., “Modeling a four-layer location-routing problem”, ***International Journal of Industrial Engineering Computations***, Volume 3, Number 1, 43-52, special issue, January 2012.
65. Hamidi, M., Farahmand, K., Sajjadi, R. (2011). “A Hybrid GRASP-Tabu Search Metaheuristic for a Four-Layer Location-Routing Problem“. ***International Journal of Logistics Systems and Management***, 2011.
66. Farahmand, K., Erdem, E. (2011). Implementation of a Quality Control System for the RME Reprocessing (Endoscopes) as Part of an Integrated Quality Management System. Department of Veterans Affairs: Technical Report. August 22, 2011.
67. Lee, E., Farahmand, K.,” Simulation of Lot Sizing Effects of Transportation and Oder Quantity under Base Stock Inventory***”, Journal of Civil Engineering & Architecture***, 2011.
68. Farahmand, K., Srinivasan, R., Hamidi, M., “CFD Heat Transfer Simulation of the Human Upper Respiratory Tract for Oronasal Breathing Condition”, ***Journal of Industrial Engineering Computations***, 2011.
69. Karim, R., Farahmand, K., “Test Battery for Task Performance and Situational Awareness Measurement”, ***Technology Interface International Journal***, 2011.
70. Farahmand, K., Karim, R., "LEAN Enterprise Principles in Healthcare - How to Apply*",****International Journal of Engineering Research and Innovation***, 2011.
71. Farahmand, K., Hamidi, M., Adharapurapu, R., “Optimizing Operation through Design for Manufacturing: A Case Study”, Proceedings of the 17th International Society of Science and Applied Technologies (ISSAT*)****International Conference on Reliability and Quality in Design*** (17th RQD), Vancouver B.C., Canada, August 4-6, 2011.
72. 50.  Farahmand, K., Sajjadi, R., Karim, R. (2011). Inpatient Nursing Unit Configuration. Department of Veterans Affairs: Technical Report–Subtask 11.2, Midwest Mountain Veterans Engineering Resource Center. May 31, 2011.
73. Sajjadi, R., Hamidi, M., Farahmand, K., “A Greedy Heuristic Algorithm for the Capacitated Location-Routing Problem”, Paper 649, ***Industrial Engineering Research Conference-IERC 2011***,  61st Annual Conference, Reno, NV, May 21-25, 2011.
74. Karim, R., Farahmand, K., “Task Capacity and Situational Awareness Measurement”, ***Industrial Engineering Research Conference-IERC 2011, 61st Annual Conference***, Reno, NV, May 21-25, 2011.
75. Farahmand, K., Karim, R., Srinivasan, R., Sajjadi, R. Fisher, L., “Clinic Space Design Using Discrete Event Simulation”, Paper 633, ***Industrial Engineering Research Conference-IERC 2011***,  61st Annual Conference, Reno, NV, May 21-25, 2011.
76. Lee, E., Farahmand, K., Oduor, P., “Signal Detection Theory to Ascertain Driving Risk and Mitigation in a Flooded Urban Area”, Abstract 753, ***Industrial Engineering Research Conference-IERC 2011***, 61st Annual Conference, Reno, Nevada, May 21-25, 2011.
77. Hamidi, M., Farahmand, K., “Modeling a Four-Layer Location-Routing Problem", Paper 018, INT 305, ***2011 IAJC and ASEE International Conference***, West Hartford, CT 06117, April 29-30, 2011.
78. Raghavan, S., Farahmand, K., “"CFD Heat Transfer Simulation of the Human  
    Upper Respiratory Tract for Oronasal Breathing Condition", Paper 016, ENG 101, ***2011 IAJC and ASEE International Conference***, West Hartford, CT 06117, April 29-30, 2011.
79. Karim, R., Farahmand, K., “Test Battery for Task Performance and Situational Awareness Measurement", Paper 259, ENG 109, ***2011 IAJC and ASEE International Conference***, West Hartford, CT, April 29-30, 2011.
80. Karim, R., Farahmand, K., "LEAN Enterprise Principles in Healthcare - How to Apply", Paper 013, INT 301, ***2011 IAJC and ASEE International Conference***, West Hartford, CT, April 29-30, 2011.
81. Farahmand, K., Sajjadi, R. (2011). Inpatient Room Modeling Simulation & Analysis. Department of Veterans Affairs: Technical Report–Subtask 11.3. Midwest Mountain Veterans Engineering Resource Center. March 31, 2011.
82. Shi, J., Farahmand, K., Zhang, J. (2011). Patient Center Medical Home (PCMH) Telephone System. Department of Veterans Affairs: Technical Report–Subtask 10.2, Midwest Mountain Veterans Engineering Resource Center. March 1, 2011.
83. Farahmand, K., Srinivasan, R., Karim, R., Sajjadi, R., “Specialty Clinics – Improved Flow, Layout and Efficiency”, ***Society of Health Systems Conference and Expo 2011***, “Building Better Health Care Systems”, Orlando, Florida, February 17-19, 2011.
84. Farahmand, K., Karim, R., Srinivasan, R., Sajjadi, R., “A systematic Approach to Layout Design for Clinic Space”, ***Society of Health Systems Conference and Expo 2011***, “Building Better Health Care Systems”, Orlando, Florida, February 17-19, 2011.
85. Shi, J., Farahmand, K., Zhang, J. (2011). Improving Clinic Visit Efficiency Using Web-based Appointment System. Department of Veterans Affairs: Technical Report–Subtask 7.2, Midwest Mountain Veterans Engineering Resource Center. January 30, 2011.
86. Lee, E., Farahmand, K., “Simulation of Base Stock Inventory Integrated with Transportation Strategy to Base Stock Inventory”, ***Proceedings of 2010 Winter Simulation Conference***, Baltimore, MD, December 5-8, 2010.
87. Sajjadi, R., Shi, J., Farahmand, K., Health Care Digital Data Collection System: An Opportunity to Improve Operations, ***Proceedings of 2010 Winter Simulation Conference***, Baltimore, MD, December 5-8, 2010.
88. Farahmand, K., Ergin, E. (2010). Simulation of the Reusable Medical Equipment in the VA Supply, Distribution, and Processing Department.  Department of Veterans Affairs: Technical Report, VAMC Fargo & Midwest Mountain Veterans Engineering Resource Center. August 1, 2010.
89. Upadhyaya, S., Shi, J., Erdem, E., Farahmand, K., "Impact of Interoperability during Online Adjudication in Healthcare Industry', ***Industrial Engineering Research Conference (IERC)***, Cancun Mexico, June 5-9, 2010.
90. Farahmand, K., Sajjadi, R. (2010). Clinic Space optimization.  Department of Veterans Affairs: Technical Report – Subtask 11.1, 11.2, 11.3/ Midwest Mountain Veterans Engineering Resource Center. June 30, 2010.
91. Shi, J., Farahmand, K., Zhang, J. (2010). Clinic Visit Efficiency. Department of Veterans Affairs: Technical Report – Subtask 7.1.1, 7.1.2, 7.1.3/ Midwest Mountain Veterans Engineering Resource Center. June 30, 2010.
92. Zhang, J., Farahmand, K., Shi, J. (2010). Centralized Scheduling vs. Decentralized Scheduling. Department of Veterans Affairs: Technical Report – Subtask 8.1.1, 8.1.2/ Midwest Mountain Veterans Engineering Resource Center. June 30, 2010.
93. Shi, J., Farahmand, K., Zhang, J. (2010). Clinic Telephone Response Optimization. Department of Veterans Affairs: Technical Report–Subtask 10.1.1, 10.1.2/ Midwest Mountain Veterans Engineering Resource Center. June 30, 2010.
94. Sajjadi, R., Shi, J., Farahmand, K., Evaluating Patient Flow Based on Waiting Time and Travel Distance for Outpatient Clinic Visits, "Management Engineering for Effective Healthcare Delivery: Principles and Applications", book chapter, 2010.
95. Hamidi, M., Farahmand, K., "Design for Manufacturing Handbook Used to Communicate between Design and Manufacturing", ***Journal of Agile Manufacturing***, Vol. 11, Issue 1, Pg. 83, 2009.
96. Lee, E., Farahmand, K., DeHaan, C., "North American Freight Network Analysis: Incorporating Logistical Impedance", ***North American Freight Flow Conference***, September 16-17, 2009.
97. Lee, E., Farahmand, K., "Location Problem for Intermodal Terminal in North Dakota", Proceedings of the ***2009 Transportation Research Forum Conference***, Portland OR, March 15, 2009,
98. Lee, E., Farahmand, K., "Considering Impedance for Intermodal Freight Transportation", ***Proceedings of the 2009 Industrial Engineering Research Conference***, May 30, June 3, 1345-1350.
99. Xiao, L., Farahmand, K., Wu, G., "Analysis of the Service-Profit Chain and the Industrial Characteristic of Civil Aviation of China", ***Journal of Nanchang Hangkong University***, Vol. 11, No. 1, P 68-74, 2009.
100. Lee, E., Farahmand, K., "Impact of Demand Variability on Supply Chain Performance", Proceedings of the ***2008 IIE Annual Conference and Expo***, IERC Poster Session, Vancouver, BC, Canada, May 17 - 21, 2008.
101. Hamidi, M., Farahmand, K., "[Developing a Design for Manufacturing Handbook](http://www.ndsu.edu/fileadmin/ime/Developing_a_Design_for_Manufacturing_Handbook.pdf)", Proceedings of the 2008 ***IIE Annual Conference and Expo***, IERC Poster Session, Vancouver, BC, Canada, May 17 - 21, 2008.
102. Hamidi, M., Farahmand, K., "The Role of Experiential Service Learning in Academic Education", ***Frontiers in Education (FIE) 2008 Conference***, Saratoga Springs, NY, October 2008.
103. Hamidi, M., Farahmand, K., "[Developing a Design for Manufacturing Handbook](http://www.ijme.us/cd_08/PDF/220%20IT%20302.pdf)", Proceedings of the 2008, ***IAJC-IJME International Conference***, Nashville, TN, November, 2008.
104. Lee, E., Farahmand, K., "Impact of Demand Variability on Supply Chain Performance", ***Proceedings of the*** ***2008 IIE Annual Conference and Expo***, IERC Poster Session, Vancouver, BC, Canada, May 17 - 21, 2008.
105. Hamidi, M., Farahmand, K., "Developing a Design for Manufacturing Handbook", ***Proceedings of the 2008 IIE Annual Conference and Expo***, IERC Poster Session, Vancouver, BC, Canada, May 17 - 21, 2008.
106. Farahmand, K., Lee, E., "Investigating Productivity and Efficiency Through Simulation Technology and Application", ***Proceedings of the 2008 IIE Annual Conference and Expo***, Applied Solutions Sessions, Vancouver, BC, Canada, May 17 - 21, 2008.
107. Lee, E., Farahmand, K., "Simulation of One-For-One Order Policy Integrated with Transportation Strategies", ***Proceedings of the 2008 IIE Annual Conference and Expo***, Applied Solutions Sessions, Vancouver, BC, Canada, May 17 - 21, 2008.
108. Farahmand, K., "[Low cost Database Design for 3D Viewing and Access](http://cden2007.eng.umanitoba.ca/resources/papers/12.pdf)", ***CDEN/C2E2, 2007 Conference***, July 22-24, University of Manitoba, Canada.
109. Farahmand K., "New Engineering Programs and University-Industry Collaboration in Engineering Education", ***2006 IJME-Intertech International Conference-Research-Education-Entrepreneurship***, Union, New Jersey, October 19-21, 2006.
110. Farahmand K. and Kaufman J.W., “[Measurement of Time Constant of Wet-Bulb Thermocouple in Air](http://journalsonline.tandf.co.uk/link.asp?id=W3P053447624GM58)", ***ASME Journal of Experimental Heat Transfer***, Volume 19, p. 165-180, Number 3/July-September 2006.
111. Kaufman J.W., Farahmand K., and Askew G.K., "[In Vivo Measurements of Human Oral Cavity Heat and Water Vapor Transport](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&amp;db=PubMed&amp;list_uids=15979952&amp;dopt=Citation)", ***Respiratory Physiology & Neurobiology Journal***, May 17, 2005.
112. Farahmand K. and Jin K., "Engineering Education for the Rio Grande Valley Engineers", ***2005 ASEE Gulf-Southwest Annual Conference***, Corpus Christi, Texas March 23-25, 2005.
113. Farahmand, K., Esmeralda, C., "[Cycle Time Reduction Using Simulation Optimization](http://www.actapress.com/PaperInfo.aspx?PaperID=17226)", ***Modeling, Simulation and Optimization*** (MSO 2004), Paper Number: 429-053, August 14-15, 2004.
114. Kaufman, J. W., Farahmand, K., Stuble, K., and Chin, C., "[Experimental Measurement to Determine Fine Dry-Bulb and Wet-Bulb Thermocouple Response Times](http://www.stormingmedia.us/28/2879/A287924.html)", US NAVY Technical Report, Report Number: NAWCADPAX/TR-2004/124, 17, June 2004. Farahmand, K., Thompson, E, "Maximizing Shop Floor Productivity Using Simulation", ***6th Annual Simulations Solutions Conference***, March 15-16, 2004.
115. Farahmand, K., "Letterkenny Army Depot Quality System Manual in Compliance with ISO 9000:2000", Department of the Army Letterkenny Army Depot, June 2004.
116. Farahmand, K., "Annual Report of the Texas A&M University-Kingsville Thirty-Sixth Faculty Senate 2002-2003", Board of Regents of the Texas A&M University System, November 2003.
117. Farahmand, K., "Letterkenny Army Depot Quality System Procedure Manual in Compliance with ISO 9000:2000 and (CP)2", Department of the Army Letterkenny Army Depot, October 2003.
118. Farahmand, K., "[Forecasting Fatigue Allowances Using Neural Networks](http://web.mst.edu/~annie/annie03_Final/wednesday/wp21.htm)", ***ANNIE 2003***, St. Louis, MO, November 1-4, 2003.
119. Farahmand, K., "CCAD Rotary Wing Facility Process Flow/Layout Assessment", AMSAM-CC-DS-IE Department of the Army Corpus Christi Army Depot, May 2003.
120. Farahmand, K., "Corpus Christi Army Depot (CCAD) Hydraulic/Mechanical Component Process Analysis Support (HMPAS)", Department of the Army Corpus Christi Army Depot, January 2003.
121. Farahmand, K., Balasubramanian, A., "[Solving Logistic and Transportation Problems in a Job Shop](http://www.informs-sim.org/wsc02papers/141.pdf)", ***Winter Simulation Conference 2002***, San Diego California, December 8-11, 2002.
122. Farahmand, K., "Ergonomics Consideration for Leather Wrapping Operation", Delphi Interior & Lighting Systems Componentes Mecanicos Operations, August 2002.
123. Farahmand, K., "Corpus Christi Army Depot (CCAD) Can Shop Process Shop Analysis", Department of the Army Corpus Christi Army Depot, August 2002.
124. Farahmand, K., "Lean Packaging System", Applied Manufacturing Conference 2002, San Antonio Texas, February 2002.
125. Farahmand, K., Ramses, L, "The Idea Behind Lean Manufacturing", Applied Manufacturing Conference 2002, San Antonio Texas, February 2002.
126. Farahmand, K., "Practical Approach to the Implementation of an Environmental Management System", The 9th Annual Coastal Bend Environmental Conference, 2001: An Environmental Odyssey, Corpus Christi Texas, September 24 - 26, 2001.
127. Farahmand, K., "Implementation of an ISO 14000 Environmental Management System", ASEE 2001 Conference, Albuquerque, NM, June 24-27, 2001.
128. Farahmand, K., "Design and Implementation of an Accelerated Business Reengineering Plan". IEMS (International Conference on Industry, Engineering, and Management Systems) and ICC&IE (International Conference on Computers and Industrial Engineering) joint conference2001, Cocoa Beach, Florida, March 5-7, 2001.
129. Farahmand, K., Kaufman, J. W., "[Experimental Measurement of Fine Thermocouple Response Time in Air](http://www.ingentaconnect.com/content/tandf/ueht/2001/00000014/00000002/art00002)", ASME journal of Experimental Heat Transfer, Vol. 14, Pg. 107-118, 2001.
130. Farahmand, K., and Longoria E., "Two Dimensional Identification Matrix and Laser Etching". Production and Operations Management II, Selected paper, 2000.
131. Farahmand, K., "[Using Simulation to Support Implementation of a Flexible Manufacturing Cells](http://www.informs-sim.org/wsc00papers/172.PDF)". Winter Simulation Conference 2000, Lake Buena Vista, Florida, December 10-13, 2000.
132. Farahmand, K., "Development of an ISO 9000 Implementation Quality Decision Support System", ASEE Annual Conference, St. Louis MO, June 18-21, 2000.
133. Farahmand, K., "Two Dimensional Identification Matrix and Laser Etching". IEMS 2000 (International Conference on Industry, Engineering, and Management Systems), Cocoa Beach, Florida, March 13-15, 2000.
134. Kaufman, J. W., Shender, B. S., Askew, G. K., Farahmand, K., "[Physiological Response to Wearing the Helicopter Aircrew Integrated Life Support System (HAILSS) in Hot Environment](http://www.stormingmedia.us/20/2041/A204183.html)", US NAVY Technical Report, Report Number: NAWCADPAX\--99-189-TR/A204183, 8 August 2000.
135. Farahmand, K., Kaufman, J. W., "[An Experimental Method for Determination of Fine Thermocouple Response Times in Air](http://journalsonline.tandf.co.uk/app/home/contribution.asp?wasp=9969cb98f71046b4b2d67bd9e2afc496&referrer=parent&backto=issue,2,4;journal,18,27;linkingpublicationresults,1:102444,1)", US NAVY Technical Report, Report Number: NAWCADPAX\TR-2000\56, March 2000.
136. Farahmand, K., "[ISO 9000 Certification of the CCAD Blade Shop](http://osr.tamuk.edu/FY%20Awards/FY%2000/FY00awards.htm)", AMSAM-CC-DS-IE Department of the Army Corpus Christi Army Depot Rotary Wing Aircraft Sustainment Program, September 2000.
137. Imrhan, S., Farahmand, K., "Arm Span- Height Relationship among Three Ethnic Groups in the US", ***The FASEB Journal, Experimental Biology 99***, Washington D.C., Abstracts 1.1-486.12, 1999.
138. Farahmand, K., Kaufman, J. W., "[Nasal Probe to Measure Intra-Airway Heat and Water Vapor Transport](http://www.stormingmedia.us/57/5787/A578763.html)", ***Aviation, Space, and Environmental Medicine Journal***- Science and Technology Watch, Vol. 70, No. 11, November, 1999.
139. Kaufman, J. W., Askew, G., Shender, B., Farahmand, K., "[Impact of a Ventilated Hood on Heat Stress at High Relative Humidity](http://www.stormingmedia.us/47/4787/A478763.html)", ***Aviation, Space, and Environmental Medicine Journal*** - Science and Technology Watch, Vol. 70, No. 11, August 1999.
140. Kaufman, J. W., Askew, G. K., Shender, B. S., Farahmand, K., "Impact of a Ventilated Hood on Heat Stress at High Relative Humidity", US NAVY Technical Report, Report Number A478763, NAWCADPAX\--99-189-TR, 5 August 1999.
141. Farahmand, K., Kaufman, J. W., "Nasal Heat Probe to Measure Nasal Cavity Heat and Water Vapor Transport", US NAVY Technical Report, Report Number A578763, NAWCADPAX\--99-189-TR, 3 August 1999. [http://www.stormingmedia.us/57/5787/A578763.html.](http://www.stormingmedia.us/57/5787/A578763.html.%20)
142. Imrhan, S., Farahmand, K., "[Male Torque Strength in Simulated Oil Rig Tasks and the Effects of Grease Smeared Gloves and Handle Length, Diameter, and Orientation](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10484281&dopt=Citation)", ***Applied Ergonomics***, 1998.
143. Kaufman, J. W., Askew, G., Shender, B., Farahmand, K., "[Role of Relative Humidity in Thermal Exchange in an Actively Cooled Chemical Protective Garment](http://www.lboro.ac.uk/departments/hu/groups/EEC/ICEE/textsearch/1998/Kaufman-1998.pdf)", ***The 8th International Conference on Environmental Ergonomics***, San Diego, CA, October 18-23, 1998.
144. Farahmand, K., "Cumulative trauma Disorders - manufacturing Considerations", ***2nd International Congress for Industrial Engineering Productivity Proceedings***, Matamoros, Mexico, October 26 - 30, 1998.
145. Farahmand, K., "[Application of Simulation Modeling to Emergency Population Evacuation](https://portal.acm.org/poplogin.cfm?dl=ACM&coll=GUIDE&comp_id=268757&want_href=delivery%2Ecfm%3Fid%3D268757%26type%3Dpdf&CFID=55327571&CFTOKEN=38669509&td=1127367254509)", ***Winter Simulation Conference Proceedings, WSC' 97***, Atlanta, Georgia, December 7-10, 1997.
146. Farahmand, K., Kaufman, J. W., "Nasal Heat Probe to Measure Intra-Airway's Heat and Water Vapor Transport", ***IEA World Conference***, 13th Triennial Congress, Tempere, Finland, July 3rd, 1997.
147. Farahmand, K., "An Integrated Technique for Minimizing WIP and Maximizing Throughput", ***International Conference in Industrial Engineering productivity 97***, Matamoros, Mexico, November 10- 14, 1997. (Article was also translated and published in Spanish)
148. Medina, M., Elkassabgi, Y., Farahmand, K., Matish, B., "Impact of the Texas A&M University-Kingsville's Industrial Assessment Center in South Texas", ***Industrial Energy Technical Conference 97***, Houston, Texas, April 23 - 24, 1997.
149. Farahmand, K., "[Application of Simulation Modeling to Emergency Population Evacuation](http://www.cc.ukans.edu/wsc96/htmfiles/ga030.htm.)", ***Winter Simulation Conference Abstract, WSC '97***, Atlanta, Georgia.
150. Farahmand, K., "[Simulation & Animation of the Operation of a Fast Food Restaurant](http://ieeexplore.ieee.org/Xplore/login.jsp?url=/iel5/6969/18768/00873434.pdf)", ***Winter Simulation Conference Proceedings, WSC'96***, Coronado, California.
151. Farahmand, K., Garza Martinez, A., "Simulation & Animation of the Operation of a Fast Food Restaurant", ***Winter Simulation Conference Proceedings***, WSC'96, Coronado, California, December 8-11, 1996. [http://portal.acm.org/citation.cfm?id=256562.256943.](http://portal.acm.org/citation.cfm?id=256562.256943.%20)
152. Farahmand, K., "Match Your Lifting Tasks To The Workers Capability", ***Ergocon '96, The Silicon Valley Ergonomics Conference Proceedings***, Palo Alto, California, May 12 - 15, 1996.
153. Elkassabgi, Y., Medina, M., Farahmand, K., "Energy Auditing and Tracking in Food Processing Facilities in Texas", ***Industrial Energy Technical Conference 96***, Houston, Texas, August 13 - 15, 1996.
154. Elkassabgi, Y., Farahmand, K., "Texas A&M University-Kingsville Industrial Assessment Center, Its Rolls and Impact on the Manufacturing Industrial Sector", ***International Conference*** "Roll of Engineers Toward Better Environment", Alexandria, Egypt, December 1996.
155. Farahmand, K., "ISO Software", ***Quality Digest***, July 1996.
156. Farahmand, K., "Expert System For Ergonomic Design of Facilities", ***IEA World Conference***, Ergonomic Design Interfaces, Products Information, October 16-20, 1995.
157. Farahmand, K., "Oral Heat probe", ***IEA World Conference, Ergonomic Design Interfaces***, Products Information, October 16-20, 1995.
158. Farahmand, K., Kaufman, J. W., "Differences in Human Buccal and Lingual Heat Transfer", ***FASEB Journal***, 1995; 9: A151.
159. Farahmand, K., "Application of Knowledge Based Expert System To Assist In Facility Design And Development Process", ***Computers In Education Journal***, October-December 1995.
160. Farahmand, K., Soma, M., "Knowledge Based Expert System for ADA's Facilities Guidelines", ***Journal of Occupational Health & Safety-Work Place Ergonomics***, May-June 1995, p36-38.
161. Kaufman, J. W., Askew, G., Farahmand, K., "Dependence of Oral Cavity heat Transfer on Ventilation", ***American Journal of Respiration and Critical Care Medicine***, 151:A640, April 1995.
162. Farahmand, K., Greene, J., Becerra, R., "ISO 9000 Certification, Johnson Controls Inside Story", Industrial Engineering Journal, Vol. 26, No. 9, September 1994.
163. Farahmand, K., Heemsbergen, B., "Floor Inventory Tracking of a Kanban Inventory System", ***Winter Simulation Conference***, Orlando Florida, December 94, 1027-1035. [http://www.citidel.org/?op=getobj&identifier=oai:ACMDL:articles.194652.](http://www.citidel.org/?op=getobj&identifier=oai:ACMDL:articles.194652.%20)
164. Imrhan, S., Farahmand, K., "Handle Design Parameters and Manual Torquing in Simulated Oil and Gas Extraction Tasks", ***Advances in Industrial Ergonomics and Safety III Journal***, Taylor & Francis, 1991.
165. Farahmand, K., "Quality In Engineering Education, Engineering Curriculum To Keep Up With The Future Trends In Industry", ***ASEE Conference-Manufacturing***.
166. Farahmand, K., "Striving For Quality in Engineering-Introducing ISO 9000 Quality Series in Industrial and Manufacturing Engineering", ***ASEE Conference-International*** Track, Anaheim, California, June 25-28, 1995.
167. Farahmand, K., "Cumulative Trauma Disorders -- Ergonomic design Comes before the Use of Wrist Restraints", ***10th International Systems safety conference***, Vol. 2, Sterling, Virginia, 1991.
168. Farahmand, K., "Design and Installation of a Cathodic Cell Corrosion Prohibitor for underground Pipeline and Casing", ***SPE conference***, Oklahoma City, Oklahoma, 1983.

**Patents**

[Apparatus for Obtaining Temperature and Humidity Measurements](http://www.techlinkcenter.org/cgi-) (Patent Number: 6659963, Issue Date: December 9, 2003)

* Design and development of an Oral probe to measure heat and mass transfer coefficient in the human oral cavity.
* Design and development of a Nasal probe to measure intra-airway heat and vapor transfer in the human nasal cavity.

**Summary of Research Activities**

* Developing a Hybrid Supply Chain to Handle Disruptions in the Wake of Pandemic and War
* Surgical Patients Referral Simulation from Rural Areas
* Use of Andon in Healthcare
* Smart Farm/Farm Logistics
* PMU Location Optimization to Increase Smart Grid Reliability
* Clinical Space Optimization
* Reusable Medical Equipment
* CFD Simulation of Human Airway System
* Productivity & Flow Improvement in Clinic and Hospitals
* Health care Simulation and LEAN Productivity Improvement through Optimization of Space, Flow, and Function
* Border Security – Surveillance
* RFID
* Non-Destructive Testing
* Portable Life Support System
* Low TRL Co2 Removal System
* ISO 9000 assessment, implementation, and certification
* Fine Thermocouple Time Constant Determination.
* Lean Manufacturing assessment and Implementation
* APACS (Advanced Portable Air Conditioning System)
* Human Cognitive Performance & Mental Capacity Measurement.
* High velocity Air Temperature Measurement.
* Design, Implementation, and Control of Manufacturing Systems.
* U.S. NAVY Meta suite studies.
* Inspiration and expiration temperature and relative humidity measurements.
* Simulation of Manufacturing Systems.
* Investigating the source of hearing disorders in electronics manufacturing plant.
* Design, Implementation, and Control of Manufacturing Systems.
* Application of concurrent engineering in bottleneck operations and product innovations.
* Knowledge based expert system for "American with Disabilities Act (ADA) of 1990" facility layout and accessibility guidelines.
* Worker's lifting capacity based on initial assessment of Anthropometric measurements.
* Ergonomics and human engineering, man-machine systems
* The effect of KANBAN on manufacturing throughput and order completion times.
* Level of modification required adopting the physical work to the handicapped worker.
* Operational analysis, task optimization, WHATABURGER, INC.
* Design of automated systems, WHATABURGER, INC.
* Working with Microbolometry technology (Lockheed Martin’s IR Technology) to characterize fluid flow rate and temperature.