**Kambiz Farahmand, PhD, PE**

Currently is a Professor of Industrial and Manufacturing Engineering and Management at North Dakota State University, where he served as the Department Head from 2005 to 2011. He is an internationally recognized expert in Productivity Improvement.  He has published over 100+ refereed papers in addition to 40+ technical papers, has over $5.7 million in research, and is a recipient of numerous awards. As an Industrial and Manufacturing 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.

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**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**

·         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

·         APACS (Advanced Portable Air Conditioning System)

·         Low TRL Co2 Removal System

·         ISO 9000 assessment, implementation, and certification

·         Fine Thermocouple Time Constant Determination.

·         Lean Manufacturing assessment and Implementation

·         Human Cognitive Performance & Mental Capacity Measurement.

·         High velocity Air Temperature Measurement.

·         Investigating the source of hearing disorders in electronics manufacturing plant.

·         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.