# JAYANT SINGH TREWN, Ph.D., Fellow ASQ, MBA, CRE/ASQ, SSMBB/ASQ

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**Home Address: 1435 Kensington Road, Grosse Pointe Park, MI 48230**

**CAREER OBJECTIVE:** Teaching, Coaching, Mentoring.

# SUMMARY OF EXPERTISE

* Lean Six Sigma Master Black Belt, Process Improvement, Change Agent, Project Management, Business Process Re-engineering, Information Technology Consulting, Process and Service Quality Programs.
* Higher Education Teaching, Academic and Institutional Research.
* Industry verticals: Healthcare, Office and Business Processes, Higher Education, Heavy Engineering.
* High School Varsity Field Hockey coach and official.

# EDUCATION and PROFESSIONAL CERTIFICATION

**Certificate** *Electric Vehicle Technology,* Macomb Community College, Warren, MI.

*June 2014 Specialization*: Electric Vehicle diagnostics, Alternative energy systems, Battery technology, Electric motors and generators, Electric Vehicle safety.

**Ph.D.** *Industrial Engineering,* Wayne State University, Detroit, MI – May 1999.

*May 1999 Specialization*: Complex Systems Design, Quality Systems Engineering & Systems Reliability, Quality Statistics and Data Analysis.

**M.B.A.** *Information Systems Management,*Wayne State University, Detroit, MI.

*May 1993 Specialization:* Information Management, Survey and Research Methodology.

**B.E.** *Mechanical Engineering***,** Regional Engineering College,University of Madras, India.

*July 1978 Specialization:* Refrigeration and AC, Welding Technology.

**SSMBB** *Certified Six Sigma Master Black Belt,* American Society of Quality.

**CRE** *Certified Reliability Engineer*, American Society of Quality.

# PROFESSIONAL EXPERIENCE

**Lecturer, Industrial and Systems Engineering, College of Engineering, Wayne State University, MI**

*Aug 2016 to Date*

***Courses:***

* BE 2100 - Probability and Statistics in Engineering
* IE 6210 - Applied Engineering Statistics
* IE 6610 - Introduction to Six Sigma
* IE 7610 - Fundamentals of Six Sigma
* IE 7270 - Reliability Estimation

**High School Mathematics Teacher, University Liggett School, Grosse Pointe Woods, MI**

*Jan 2014 to Aug 2016*

***Courses:***

* Pre-Calculus Honors
* Introduction to Probability and Statistics
* Calculus based Probability and Statistics

**Consultant and Lean Coach, Lean Fox Solutions, Huntington Woods, MI**

*Jan 2013 to May 2014*

* Leadership consulting in designing, deploying and improving Lean and Six Sigma programs.
* Leadership coach and mentor for strategic performance improvement.

**Director Quality Assurance, Thomson Reuters, Philadelphia, PA**

*Nov 2010 to Dec 2012*

* Design, Deploy, Manage and Improve the performance of Global Editorial Operations engaged in content acquisition for scientific, legal, life sciences and intellectual patent research.
* Built a real-time data acquisition quality risk algorithm to detect suspect data – resulted in improvement of data accuracy from 94% to 99.5%

**Director Operational Excellence, Spectrum Health Medical Group***.* Grand Rapids, MI

*Nov 2009 to Nov 2010*

* Design, Deploy, Manage and Improve the operations at 80 Spectrum Health Medical Group physician practice sites. The program is designed around 5 pillars of operational excellence: Operating Margin, Patient Satisfaction, Employee Engagement, Physician Growth and Quality. Implement a Lean training program for enabling front line staff to identify and remove waste in operations. Managed 5 operational improvement engineers.

**Master Black Belt and Faculty, Beaumont University,** *Beaumont Hospitals.* Royal Oak, MI

*May 2007 to Nov 2009*

* Design, Deploy, Manage and Improve the Lean Six Sigma performance improvement (PI) program at Beaumont Hospitals across three hospital sites in Michigan. The program is designed around pillars of knowledge-ware, mentored projects, Six Sigma expert support structure, pay for performance rewards, shared project repository for project learning dissemination and collaboration meetings and symposiums. Mentored Lean Experts and Six Sigma Experts to successfully run Lean and Six Sigma PI projects and deliver expected results.
* Improved CPD delivery of add-on instruments to Surgery from a CT of 30 minutes to 5 minutes
* Improved the CPD cost structure by over $100,000 per year by restructuring staffing, reducing surgical instruments inventory and restructuring loaner instruments and purchase agreements
* PI project leader for following projects: Nursing process re-engineering, Labor management, Breast Cancer patient experience mapping, Physician office re-engineering using lean principles.

**VP Quality and Process Engineering***, HOV Services, formerly Lason Inc., Troy, MI*

*Mar 2006 to May 2007*

* Planned and managed Quality and Process Engineering initiatives for worldwide BPO global operations in Troy, MI, Chennai, India and Nanchang, China. Launched and delivered change initiatives based on executive and board’s annual strategic vision and short and long term goals.
* Reduced annual penalties for poor quality captured data from over 1M$ to under $ 100,000
* Increased healthcare billing data capture accuracy from under 98% to over 99.5%
* Implemented a new process for Mortgage Files imaging and retrieval built on Design for Six Sigma principles hitting SLA drives cost, TAT and accuracy on day 1 of project launch.
* **Administrative Consultant/ Hospital Administration,** *Beaumont Hospitals,* Royal Oak, MI

*Jan 2003 to Mar 2006*

* Designed, implemented and managed business operations and quality improvement projects such as: Endoscopy staffing, CPD case cart assembly error reduction, Blood transfusion process improvement, IVAC pump distribution and location management, Surgery PACU throughput optimization, Ob/Gyn block schedule modeling, and numerous others.

**Director Quality/ I.T. Consultant*,*** *Vetri Systems, a Lason Company, Troy, MI*

*Jun 1999 to Jan 2003*

* Planned and directed Vetri Systems’ quality programs for global operations in Troy, MI and Chennai, India.

# HIGHER EDUCATION TEACHING and RESEARCH EXPERIENCE

**Part-time Faculty***,*

* College of Engineering, Lawrence Technological University, MI
* School of Business, Oakland University, MI
* College of Engineering, Industrial & Manufacturing Engineering, Wayne State University, MI
* School of Business Administration, Wayne State University, MI
* College of Business Administration, University of Detroit, MI

**Assistant Director,** Office of Strategic Planning, Wayne State University, MI

**Research Associate**, Center for Urban Studies, Wayne State University, MI

# BOOKS AUTHORED

* Trewn, J., Sperl, T., Ptacek, R. and Salimi, D. Kaizen Demystified, MCS Media, Inc., 2014.
* Sperl, T., Ptacek, R. and Trewn, J. The A3 Pocket Handbook for Kaizen Events, MCS Media, Inc., 2013.
* Ptacek, R., Sperl, T. and Trewn, J. The Practical Lean Six Sigma Pocket Guide, MCS Media, Inc., 2013.
* Sperl, T., Ptacek, R. and Trewn, J. Practical Lean Six Sigma for Healthcare, MCS Media, Inc., 2013.
* Yang, K. and Trewn J., Multivariate Statistical Methods in Quality Management, McGraw Hill, 2004.

# STATISTICS EXPERIENCE

* Designed heuristic models to prevent data errors in content acquisition for scientific research.
* Designed data quality acceptance models for data capture from medical billing forms (UB90, HCFA).
* Statistical model building for determining effective strategies for implementation of smoking cessation programs in the state of Michigan funded by the Department of health, Michigan, 1995.
* Statistical analysis for monograph on Breast Cancer demographic study in the Metro Detroit Area for the Karmanos Cancer Institute, 1999.
* Cluster Analysis model for creating a report on electoral voting preferences in 1993 Detroit city mayoral race, report created for Detroit Free Press.
* *“Report on Southwestern Oakland Cable Commission Customer Needs Assessment Survey”*, Center for “Report on the Detroit Health Department Management Information System”, Center for Urban Studies, 1993.
* *Statistical Packages: Mainframe*: SPSSx and SAS *PC*: SPSS v 16.0, Minitab v 15.0, JMP, XLMiner.

# PROFESSIONAL and LEADERSHIP ACTIVITIES

* Chair of the Beaumont Hospitals, Royal Oak campus Diversity Council, 2008
* President, Institute of Industrial Engineers (IIE) Detroit Chapter, 2004
* Vice President Chapter Development, Institute of Industrial Engineers (IIE) Detroit Chapter, 2001 to 2003
* Executive Vice President, Institute of Industrial Engineers (IIE) Detroit Chapter, 2001 to 2003
* Vice President of Business, Consulting and Industry, American Society of Quality (ASQ), National Education Division, 2001, 2002

# CONFERENCES & SEMINARS ATTENDED

* Lean Six Sigma Conference (ASQ), Feb 24-25 2014, Phoenix, Arizona.
* Lean Six Sigma and Process Improvement Summit (WCBF), March16-19 2009, New Orleans, Louisiana.
* Lean Six Sigma and Process Improvement Summit (WCBF), March 20-23, 2008, New Orleans, Louisiana.
* 2004 Society for Health Systems Conference, Orlando, Florida, Feb 19 – 20, 2004.
* 2003 Annual IIE Conference, Portland, Oregon, May 18 – 21, 2003.
* 2002 Annual Quality Congress (ASQ), Denver, Colorado May 18 - 22, 2001.
* 6 Sigma Educational Seminar: Certified 6 Sigma Black belt Refresher Course, ASQ, Detroit, Michigan.
* 2001 Annual Quality Congress (ASQ), Charlotte, North Carolina May 8 - 10, 2001.
* Professional Training: ISO 9000 Lead Auditor, Oct. 2000 (scheduled), Perry Johnson Inc., Southfield, Michigan.
* Corporate seminar: TQM – Anaar Roadmap Workshop, Jan 2001, at Lason Systems, Troy, Michigan.
* Corporate seminar: TQM Awareness Seminar, July 2000, at Vetri Systems, Troy, Michigan.
* First International Conference on Axiomatic Design ICAD 2000, MIT, Cambridge, MA, June 21-23 2000.
* Corporate seminar: QUEST (Quality Program Implementation), fall 1998 at Wayne State University, Detroit, Michigan.
* IEEE International Conference on Systems, Man and Cybernetics, San Diego, October 1998.
* Third International Symposium on Quality Function Deployment, Linkoping, Sweden, Oct. 1997.
* Post conference seminar: “Hoshin Policy Deployment”, Ninth Symposium on Quality Function Deployment, Novi, Michigan, June 1997, conducted by Prof. Yoji Akao, Prof. Kozo Koura, and Prof. Tadashi Yoshizawa.
* Conference seminar: “Statistical Problem Solving”, April 25-27, 1995 conducted by Multiface, Inc, Michigan.
* Educational seminar: CRE preparatory seminar offered by ASQ Detroit Section, fall 1995.

# COMPUTER PROFICIENCY

* I*ndustrial Engineering Analysis:* Simulation: SIMAN v 2.0, Process modeling: Process Model v 3.0,
* Homegrown programs: MS Excel macros for staffing modeling, unit/department/stop area arrivals and occupancy modeling,
* *Operating Systems:* MS Windows 98 and Windows NT 4.0, MTS, CMS/MVS/TSO.
* *Languages: FOCUS,* FORTRAN, BASIC, and C.
* *Statistical Packages: Mainframe*: SPSSx and SAS *PC*: SPSS v 12.0, Minitab v 10.0, JMP.

# SCHOLARSHIPS AND AWARDS

* Robert C. Noyce Teacher Fellow, Teaching Scholarship, 2014-2015
* Recipient of the 2008 Distinguished Service Award of the Detroit Chapter of the Institute of Industrial Engineers awarded at the Engineering Society of Detroit annual awards dinner, Feb 2008.
* Recipient of the Wayne State University Presidential Award for meritorious service, 1996-1997.
* Graduate Professional Scholarship (Full Tuition) at Wayne State University, 1990-1991.

# MEMBERSHIPS AND PROFESSIONAL ACTIVITIES

* Fellow of the Institute of Marine Engineers, India - active.
* Fellow of the American Society of Quality (ASQ) - active.
* Senior member of the Institute of Industrial Engineers (IIE).
* Member of the ASQ Technical Review Committee for ANSI Z1.11 ANSI/ASCC Z1.11-1996 AMERICAN NATIONAL STANDARD Quality Assurance Standards Guidelines for the Application of ANSI/ISO/ASQC Q9001 or Q9002 to Education and Training Institutions, Jan to August 2000.

# PRESENTATIONS, PUBLICATIONS AND REPORTS

* Trewn, J. and Sperl, T. *Human Factors in Healthcare workshop.* Proceedings of the Lean Six Sigma conference, Feb 24-25 2014, Phoenix, Arizona.
* Trewn, J. *Voice of the Customer, QFD workshop.* Proceedings of the Lean Six Sigma and Process Improvement Summit, March 16-19 2009, New Orleans, Louisiana.
* Trewn, J. *Transition from TQM to Lean Six Sigma.* Proceedings of the Lean Six Sigma and Process Improvement Summit, March 20-23, 2008, New Orleans, Louisiana.
* Trewn, J. and Trewn, P.A. *A Treatise on Process Variation that Affects Patient Flow in Hospitals.* Proceedings of the 16th Annual Society for Health Systems Conference, February 20-21 2004, Orlando, Florida.
* Trewn, J. and Beauregard, K. *6 Sigma, M3, Metric Methods and Measurement.* Proceedings of the Six Sigma Symposium, IIE Detroit Chapter, October 24, 2003.
* Trewn, J. and Goyal, N. *A Treatise on Implementing Six Sigma Projects in Supply Chains Spanning Multiple Continents.* Proceedings of the IIE Annual Conference, May 2003.
* Trewn, J. *TQM Concepts and Implementation*. Presented at the joint meeting of IIE and SAVE at Detroit, MI, October 9th, 2001.
* Trewn, J. and Yang, K. (2000). *A Treatise on System Reliability and Design Complexity.* Proceedings of the First International Conference on Axiomatic Design ICAD 2000, MIT, Cambridge, MA, June 21-23 2000. pp. 162-168.
* Trewn, J. and Yang, K. (1998). *The Relationship Between System Functions, Reliability and Dependent Failures.* Proceedings of the 1998 IEEE International Conference on Systems, Man and Cybernetics, San Diego, October 1998. pp. 4722-4727.
* Trewn, J. and Yang, K. (1997). *Evaluating QFD Designs: A Systems (Axiomatic Design) Approach.* Trans. Of the Third International Symposium on Quality Function Deployment, Linkoping, Sweden, Oct. 1997.
* Trewn, J. and Yang, K. (1997). *Reliability Function Deployment: A Systems Approach.* Trans. Of the Ninth Symposium on Quality Function Deployment, Novi, MI, June 1997. pp. 55-74.
* *“Report on Southwestern Oakland Cable Commission Customer Needs Assessment Survey”*, Center for Urban Studies, 1995.
* “Report on the Detroit Health Department Management Information System”, Center for Urban Studies, 1993.