

CARMEN TAVERA

119 Primrose Drive
Blacksburg, Virginia 24060

Phone: 248-982-0641
Email: hctavera@vt.edu

CAREER SUMMARY

Senior Quality Engineer with extensive experience in the application of statistical techniques. Areas of demonstrated expertise are design of experiments (DOE), reliability analysis and statistical process control (SPC). Proven ability to analyze problems quickly, develop optimal solutions, and complete projects successfully. Excellent interpersonal skills with strong ability to interface with all levels of an organization. Fluent in Spanish. B.S. and M.S. in Applied Statistics.

PROFESSIONAL EXPERIENCE

VIRGINIA TECH, Blacksburg, VA

2013-Present

Full Time Instructor

Fall and Spring: STAT-3005, Introduction to Statistical Methods. STAT-3006 Statistical Methods II, STAT-4604 Statistics for Engineers, STAT-4706 Probability & Statistics for Engineers II. STAT-3615 Biological Statistics. Summer I: STAT-3005 on line. Summer II: STAT-4604 on line or STAT-4706 on line. Develop course material, prepare lectures, homework and examinations. Determine final grades for all students.

VIRGINIA TECH, Blacksburg, VA

2010-2012

Part Time Instructor

Fall and Spring: STAT-3005, Introduction to Statistical Methods. STAT-3006 Statistical Methods, STAT-4604 Statistics for Engineers, STAT-4706 Probability & Statistics for Engineers II. Summer II: STAT-4604 on line. Develop course material, Prepare lectures, homework and examinations. Independently determine final grades for all students.

QUALITY ENGINEERING, a journal published by TAYLOR & FRANCIS, Philadelphia, PA

2009-2010

Manuscript Coordinator

Performed initial review of all manuscripts, entered manuscripts into Manuscript Central editorial system. Performed pre-production and final production routines for all accepted manuscripts. Performed periodic technical review of submitted articles as requested by the editor.

FCI AUTOMOTIVE, Westland, MI

2004-2006

Senior Supplier Quality Engineer

Responsible for quality in stamping area including 6 sigma projects, respond to customer complaints in 8D format using Covisint & other quality systems. Create and update PPAP documentation including control plans. Certified Six Sigma Green Belt

- Six sigma project annual savings of \$400,000 through improvements on press efficiency and product quality.
- Developed quality improvement program that resulted on 100% improvement on stamping customer concerns.
- Received 2005 "Quality Award" for outstanding performance on quality improvement initiatives.

DAIMLER-CHRYSLER POWER SYSTEMS, Detroit, MI

2004-2006

Senior Reliability Engineer

2001-2003

Developed, implemented and monitored reliability programs.

- Created a unique database to detect early failure trends resulting in a more effective and timely solution of field problems.
- Developed and achieved reliability goals for three major engine programs, through the use of Weibull analysis, designs verification and validation plans (DVP&R), failure mode and effect analysis (DFMEA) and failure tracking (FACARS).
- Established failure trend analysis and cost estimates for accrual purposes.
- Determined failure mode distributions and correlation factors between lab test data and field data that resulted in more realistic estimates of failure rates.

Senior Statistical Engineer

1995-2001

Trained and coached advance engineers and product engineers on the standard utilization of statistical tools for product improvement.

- Applied DOE to new diesel engine combustion systems, which resulted in the optimization of two engine combustion systems.
- Played key role developing the corporate multi-stage release process (MSRP) manual, providing standardized procedures from concept approval through manufacturing of new products.
- Facilitated, coached and trained DOE and statistical methods to all sectors of the company.
- Developed material and trained the Six-Sigma black belts in the use of MINITAB.
- Coached the Six-Sigma black belts with the resolution of quality problems.
- Created documentation for an electronic help system to explain statistical thinking and variability, to help engineers in the determination of better testing techniques.

Statistical Engineer

1993-1995

Planned and developed programs to aggressively implement quality and statistical techniques

- Trained and worked with manufacturing engineers, plant supervisors, and operators in the application of SPC for quality improvement through the use of statistical techniques.
- Developed a company-wide quality training matrix resulting in a basic set of training material for all new hires.
- Developed and taught several courses including: Quality Overview, Basic Statistics Review, Design and Analysis of Experiments.
- Initiated the use of hypothesis testing to compare percentage improvement on component changes resulting in faster and more efficient testing.

SOLVAY AUTOMOTIVE, Troy, MI

1991-1992

Corporate Statistical Engineer

Managed SPC program at plants in USA, Mexico and Canada.

- Developed SPC material and trained 100% of personnel in Mexico and Canada in the utilization of SPC tools.
- Interfaced with costumers and suppliers in quality management resulting in better solution of quality issues.
- Worked with suppliers and customers including Ford and Chrysler on the successful completion of advanced quality plans (AQP) and the solution of manufacturing quality issues.

CHRYSLER MOTOR CORPORATION, Trenton, MI

1988-1991

Quality Engineer

1990-1991

Responsible for quality initiatives. Reviewed engineering design specifications and recommended engineering changes for new engine components.

- Saved \$700,000 annually in scrap reduction through a quality initiative program in the crankshaft area.
- Provided technical support to the SPC department on the use of advanced statistical techniques.
- Established all new key characteristics and performed gage and machine capabilities studies for quality tracking of a new cylinder head line that was considered one of the most problem free lines ever launched.

Quality Analyst

1988-1990

Responsible for the development and monitoring of accelerated quality programs (AQP).

- Saved over \$500,000 annually through a quality initiative program in cylinder head machining.
- Significantly improved productivity in four manufacturing areas through the use of statistical methods.
- Initiated solutions to resolve cylinder head casting problems resulting in a 100% improvement.

EDUCATION

Master of Science, Applied Statistics, University of Toledo, Toledo, OH

1988

Minor: Industrial Engineering

Bachelor of Science, Statistics-Mathematics, Florida International University, Miami, FL

1985

ADDITIONAL ACCOMPLISHMENTS

- Helped organize the 5th International Conference for Business and Applied Statistics (ISBIS5) on Lima Peru, January 2006. www.stat.vt.edu/isbis5
- Volunteer work with the A World in Motion Program sponsored by the SAE to help elementary school students exploring science and mathematics through interactive engineering experiments.

- Part time SPC trainer for Henry Ford Community College as part of a Grant from the State of Michigan to train Hispanics working in the manufacturing industry.
- Liaison between Virginia Tech and several Peruvian Universities for research and graduate student recruitment.