

STATISTICAL CONSULTANT AND TRAINER

Six Sigma / Data-based Decision Making / Process Improvement

Professional statistician with extensive experience in all aspects of data-based decision-making as well as in the design, control and improvement of processes and procedures. Extensive teaching and curriculum development experience.

AREAS OF INTEREST

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| □ Lean Six Sigma | □ Measurement Systems Analysis |
| □ Design and Analysis of Experiments | □ Process and Product Development |
| □ Environmental Statistics | □ Quality Management |
| □ Statistical Training | □ Minitab, JMP, SAS, R, Visual Basic |
| □ Statistical Computing | □ Sampling |
| □ Multivariate Statistics | □ Advanced Statistical Modeling |

PROFESSIONAL EXPERIENCE

SAM HOUSTON STATE UNIVERSITY – Huntsville TX

Statistics Lecturer – August 2016 to present

DUPONT COMPANY – Houston, TX

Regional Engineering Office – DuPont Engineering and Applied Statistics

Consultant and Master Black Belt, 1987 to 2016

Provided statistical consulting, mentoring and training to most DuPont businesses and functions. These included sourcing, plastics, chemicals, construction, elastomers, agriculture, finance, marketing, nutrition and health for problem-solving, process improvement, quality assurance, risk assessment as well as environmental remediation and monitoring. Additionally helped business units to collect and analyze data to solve business, supply chain, manufacturing and measurement system problems as well as how to use data to make enlightened decisions.

Projects and Results:

- Taught over 80 Green Belt, Black Belt and Master Black Belt courses in the US and Europe. This corporate initiative resulted in over \$1B in verified financial benefits. Received excellent reviews and feedback.
- Managed the corporate four-week Black Belt curriculum since 2004. Oversaw significant enhancements to the content and teaching approach that benefited over 1200 students. Trained and mentored all DuPont Black Belt trainers. The students went on to deliver \$1M in average benefits per year per Black Belt in cost savings and sales growth.
- Wrote several programs and macros to automate routine statistical analyses performed by site engineers for customers resulting in hundreds of reduced man-hours.
- Led a site Six Sigma project team that free up manufacturing capacity resulting in \$1M in additional revenue.
- Mentored over 100 leaders through their project implementation. The benefits from these projects positively impacted corporate activities from product and process development to sourcing, manufacturing, quality, environmental stewardship and marketing.
- Developed and taught corporate training in environmental statistics, macro writing and advanced modeling. Guided three former DuPont work sites through successful clean-up and closure.

DuPont Company – Wilmington DE
Quality Management and Technology Center – 1980-1987

Statistician

Assisted and trained three manufacturing sites and their associated business and research centers.
Guided a development laboratory in data collection and experimental design.

Projects and Results:

- Oversaw the implementation of a quality system in a large multi-site DuPont films business. Conducted training for management, engineers, and front-line personnel. Significant improvements in product quality and customer satisfaction were achieved. Received a company recognition for excellence in training and support to the business.
- Co-authored *Product Quality Management*, an internal manual implemented by most DuPont businesses. DuPont was recognized by customers as making significant achievements in quality during this time.
- Conducted a nation-wide study on the impact of a DuPont feed product on dairy cattle, resulting in significant financial benefit to DuPont.

EDUCATION & CREDENTIALS

BRIGHAM YOUNG UNIVERSITY, PROVO, UT

Master of Science in Statistics, 1980

- Master's thesis included developing a unique program for later department usage
- Pioneered the use of SAS in the department

Bachelor of Science in Statistics, *Magna Cum Laude*, 1978

- Computer Science Minor.
- National Merit Scholar, Dean's List citation, Statistics Department Scholarship.

DuPont

- Certified Six Sigma Black Belt and Master Black Belt, 2001
- Certified Quality Auditor, 1985

TEACHING EXPERIENCE

Taught over 120 offerings of the following courses within DuPont, 1980-2015

- Strategy of Experimentation
- Experimentation for Robust Product Design
- Product Quality Management
- Implementing the ISO 9000 Standards
- Statistical Process Control
- Solving Tough Quality Problems
- Effective Quality Improvement of Processes (Course Developer)
- Focus on Data
- Data Analysis for Decision Making
- Statistical Methods for Environmental Applications (Course Developer)

- Disciplined Process Improvement
- Product and Process Design

Taught the following Six Sigma sessions within DuPont, 2000-2015

- Over 30 Black Belt training waves (4 weeks each) in US and Europe
- 8 Master Black Belt waves (2 weeks each) in US and Europe
- Over 5 Process Owner training waves (3 days) in US
- Over 40 Green Belt waves (each 9 days over 3 weeks) including 8 Green Belt Blended Learning Waves.

PRESENTATIONS AND PUBLICATIONS

Bias in Wilks Lambda in Stepwise Discriminant Analysis (with A.C. Rencher), Technometrics, 22, 349-356, 1980.

A General Procedure for Robust Discrimination. Master's Thesis (1980) – Brigham Young University Statistics Department.

A Practical Guide to CUSUM, Presented at the BYU Summer Institute of Applied Statistics, July 15, 1985.

Making SPC Work for You. ASQ regional meeting at Princeton, NJ, 1986

A Study of Aging in Neoprene (with T.J. Kelly), ASC Rubber Division Annual Meeting, Detroit, MI, 1990.

Sheet Structures (with S. P. Bailey, P. E. Ness, and R. E. Scruby), Chapter 27 in DuPont's Product Quality Management (PQM) book, D. W. Marquardt (Editor), 1991.

Six Sigma Journey and Knowledge Management in DuPont, Presented at the APQC Annual Knowledge Transfer Session, Houston, TX, November 18, 2003.

How Six Sigma Works, Presentation at the Materials Science and Engineering's, Houston Chapter, March, 2005.

PQM, An Example of Statistical Engineering, Presented at the Joint Statistical Meetings, Miami Beach FL, August 1, 2011.

Advanced Regression Techniques. DuPont Webinar, January, 2014.

How to Write Macros in Minitab. DuPont Webinar, March, 2015.