

**ROBERT K. HENDERSON**

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**PROFESSIONAL EXPERIENCE**

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- Stephen F. Austin State University, Nacogdoches, Texas** **Fall 2009-Present**  
Taught as Tenure-Track Assistant Professor for Mathematics & Statistics department – undergraduate Introduction to Probability & Statistics and graduate courses in Multivariate Statistics and Regression Analysis  
Project NEXt 2009 Fellow and 2010-11 Wisely School of Honors Fellow
- Concordia University, Austin, Texas** **Spring-Summer 2009**  
Taught as an adjunct professor in the Accelerated Degree Program for business, human resources, and health care administration majors. Courses included Introduction to Statistics and Finite Mathematics.  
Redesigned Finite Mathematics course taking drop rate from 67% (spring) to 0% (summer)
- Samsung Austin Semiconductor, Austin, Texas** **2004-2009**  
The US production site for the ~\$7B Samsung Corporation contributing over \$1B in annual revenues
- Site Statistician** (2006-2009)  
Provided statistical consulting, technology transfer, and training services to entire campus consisting of ~2000 employees operating high volume semiconductor production 200mm and 300mm fabs.
- Metrology Group Manager** (2004-2006)  
Managed a group of 5 engineers and 20 technicians responsible for over 70 metrology tools involving a dozen different platforms and suppliers.
- DuPont Photomasks, Inc., Round Rock, Texas** **1988-2004**  
An ~\$300M supplier of this critical enabling product to the semiconductor industry
- Metrology Team Leader** (2000-2004)  
Managed a group of seven engineers responsible for over half a dozen different types of metrology tools, as well as the processes involved to maintain them as viable and valuable manufacturing assets in a 24-7 production facility.
- Metrology Engineer** (1996-2000)  
Lead engineer with sole responsibility for major metrology tools within the organization's R&D facility.
- Quality Manager** (1988-1996)  
Managed the Quality organization at the DPI-Round Rock facility with some additional company-wide responsibilities.
- E.I. duPont de Nemours, Inc., Wilmington, Delaware** **Prior to 1988**  
An ~\$30B multi-national manufacturing and science organization
- Internal Consultant – Engineering Services Division – Applied Statistics Group**  
Provided consulting services to Nylon, Mylar, and Electronics businesses, as well as staff groups focused on Environmental issues and General Business Management.

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**EDUCATION**

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- Southern Methodist University, Dallas, Texas – PhD in Mathematical Statistics**  
Dissertation: Robust and Resistant Regression Estimators
- University of Delaware, Newark, Delaware (nights) – Masters in Business Administration**
- Southern Methodist University, Dallas, Texas – Masters of Science in Mathematical Statistics**
- Trinity University, San Antonio, Texas – Bachelors of Arts in Mathematics and History**  
Graduated Summa Cum Laude, Elected Member of Phi Beta Kappa

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**SELECTED PUBLICATIONS AND PRESENTATIONS**

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- Henderson, Robert K. "Do You Know Your Limits?" Accepted 8/3/10 for future publication in *Quality Progress*.
- Henderson, Robert K. "An Alternative Distributional Model for Control of Process Particle Counts in the Semiconductor Industry." Presented at the Joint Mathematics Meetings in San Francisco, California; January, 2010.
- Henderson, Robert K. "Process Control in the Presence of Fixed Within Wafer Profiles." Presented at the ISMI Manufacturing Effectiveness Conference in Austin, Texas; October, 2008.
- Henderson, Robert K. & Jason Malik. "Matching CD-SEM Tools for Feature Size Measurement in a High Volume Production Operation." Presented at the ISMI Manufacturing Effectiveness Conference in Austin, Texas; October, 2007; and also appeared on the internet magazine Fab Engineering & Operations in two parts; February & May 2008.

- Henderson, Robert K. "Evaluation of Particle Counts using Gamma Distributions." Presented at the ISMI Manufacturing Effectiveness Conference in Austin, Texas; October, 2006.
- Henderson, Robert K. "Mask Critical Dimension Metrology." Presented by invitation at IEEE Lithography Conference on St. John's, US Virgin Islands; Dec. 2000.
- Henderson, Robert K. "What Amount of Measurement Error is Too Much?" Appeared on internet web site [www.semiconductoronline.com](http://www.semiconductoronline.com); Spring, 2000.
- Chen, Jerry X., Robert K. Henderson, and Franklin Kalk. "Investigating defect inspection and sensitivity analysis for MoSi-based PSMs." *MICRO* Apr. 2000: 29-36.
- Grantz, John, Robert K. Henderson, and James L. Wood. "Carbon staining effects from SEM exposure." Presented at SPIE 19<sup>th</sup> Annual Symposium on Photomask Technology in Monterrey, CA Sept. 1999. Appeared in Symposium Proceedings Dec. 1999: 668-676.
- Henderson, Robert K. "Measurement Error Revisited." Presented at SPIE 19<sup>th</sup> Annual Symposium on Photomask Technology in Monterrey, CA Sept. 1999. Appeared in Symposium Proceedings Dec. 1999: 703-727.
- Henderson, Robert K. "Beta test performance of the Leica LWM-250 UV CD measurement tool." Presented at SPIE 19<sup>th</sup> Annual Symposium on Photomask Technology in Monterrey, CA Sept. 1999. Appeared in Symposium Proceedings Dec. 1999: 760-783.
- Patrick, D.R., et al (including Robert K. Henderson). *Toxic Air Pollution Handbook*. New York: Van Nostrand Reinhold, 1994.
- Marquardt, D.W., et al (including Robert K. Henderson). *Product Quality Management*. Wilmington, DE: E.I. duPont de Nemours, 1991.
- Henderson, Robert K. "Capability Assessment and Comparison of the Nikon 2i, Nikon 3i and LMS-2000 Registration Measurement Devices." Presented at BACUS 10<sup>th</sup> Annual Symposium on Photomask Technology in Santa Clara, CA Sept. 1990. Appeared in Symposium Proceedings, Spring, 1991.
- Henderson, Robert K. and Thomas D. Moyer. "Evaluating compliant pin design using experimental design techniques." *Connection Technology* Oct. 1989.
- Henderson, Robert K. "On making the transition from inspection to process control." Presented at Joint Statistical Meetings in Chicago, IL Aug. 1986.