1999 ASA QPRC – SIX SIGMA QUALITY: ACCOMPLISHMENTS, OPPORTUNITIES, AND CHALLENGES
AGENDA

Wednesday, May 19th, 1999			
8:00 - 8:30	**Registration Begins; Continental Breakfast (for Workshop Participants)**		
8:30 - 12:15	**Workshops and General Conference Registration**		
	Conf. Rm. 1 A: Six Sigma Concepts for Statisticians Instructors: Roger Hoerl, William Hill, Ron Snee, Steve Zinkgraf	Auditorium B: Useful Statistical Tools You Did NOT Learn in Six Sigma Training Instructors: Piero Bonissone, Necip Doganaksoy, Martha Gardner, Gerald Hahn, Angie Neff, Brock Osborn, Tom Repoff, Josef Schmee, Chris Stanard, Jeff Stein	
12:15 - 1:00	**Lunch (for Workshop Participants)**		
1:00 - 1:30 Auditorium	**Introduction and Welcome: Nancy Martin, GE CRD; Jim Tien, RPI; Tom Boardman, Colorado State (ASA Q&P Section Chair); Tim Keyes, GE CRD**		
1:30 - 2:30 Auditorium	**Keynote Address: Blan Godfrey, Chairman, Juran Institute (with J. DeFeo and Richard Chua)** **Title – Six Sigma: From Strategic Deployment to Bottom-Line Results** **Session Chair: Willem Sederel, GE CRD**		
	Application Sessions (Auditorium)	Tools Sessions I (Conf. Rm. 1)	Tools Sessions II (Conf. Rm. 2)
2:35 - 3:35	Six Sigma Implementation I	Control Charts I	Design for Six Sigma
	J. Li, J. Rockwell, A. Raich, UOP LLC – Applying Six Sigma in an Innovative R&D Organization S. Gabel, Kodak – Six Sigma at Eastman Kodak Company	T. J. Boardman, C. R. Gumina, Colorado State Univ. – Control Charts for Means with Limits Obtained by Bootstrap Methods M. Raghavachari, RPI - G. Runger, J. Surtihadi, Multivariate Control Charts for Process Dispersion	D. Beeson, H. Bond, D. Carpenter, K. Gau, GE Aircraft Engines – PEZ 1.4 - A General Purpose DFSS Software Tool J. Stein – Demonstrating the Equivalence of Two Process Means
3:35 - 3:50	Break		
3:50 - 5:20	Design for Six Sigma Experiences (Auditorium)	Real World Methods (Conf. Rm. 1)	Process Capability Indices (Conf. Rm. 2)
	S. Roychoudhury, GE CRD – Design for Six Sigma on Feasibility of High-Flux Industrial CT Tube D. Ellington, GE Plastics, N. Doganaksoy, GE CRD – Predictive Design and Extrusion Line Simulation - An Initial Application To Process Control G. Hahn, GE CRD – The Six Sigma Initiative: Lessons Learned	G. Forman, E. Kaminsky, D. Shaddock, K. Ma, A. Johnson, L. Douglas, GE – Physical Layout Statistical Analysis G. Dyson, GE – The Application of Statistical Modeling in Engineering N. Wadhwa – Mitchell Madison Group, Defect Rate Estimation using Imperfect Zero-Defect Sampling with Rectification	N. F. Hubele, L. Zimmer, S. Kunjurananthram, Arizona State Univ., M. Dumitrescu, Bucharest Univ. – A Simple Graphical Hypothesis Testing Procedure for C_{pm} Goals J. S. Ramberg, Univ. of Arizona, M. Scussel, Valentine Corporation – Process Capability Indexes: Confidence Intervals and Sample Size Requirements J. Voelkel, RIT – Process Indices for Certain Non-Stable Processes
5:30 - 6:15	**Mixer**		
6:15 - 7:30 Cafeteria	**Dinner**		
7:30 - 9:00 Auditorium	**Invited Speaker: J. Stuart Hunter, Princeton (Emeritus)** **Title: Statistics and the Pursuit of Quality** **Session Chair: Jeff Hooper, Lucent Technologies**		

Thursday, May 20, 1999			
8:00 - 8:30	**Continental Breakfast**		
8:30 - 9:30 Auditorium	**Invited Speaker: William Q. Meeker, Iowa State University Title: Accelerated Reliability Testing – Applications and Pitfalls Session Chair: Angela Neff, GE CRD**		
	Applications Sessions I (Auditorium)	Tools Sessions I (Conf. Rm. 1)	Tools Sessions II (Conf. Rm. 2)
9:30 - 10:30	Six Sigma Implementation II	Measurement	Control Charts II
	W. Berezowitz, B. Whittaker, GE Medical Systems – Getting Statistics Off the Shelf - The Culture Change Challenge S. Zinkgraf, R. Snee – Institutionalizing Six Sigma in Large Corporations: A Leadership Roadmap	R. Kacker, NIST – Why and When Should One Calibrate A Measurement System W. Liggett, NIST – Between Rockwell Hardness and Six Sigma	S. J. Caffrey, B. Pociatek, Kodak – A Control Chart for an Improvement Metric Willemain, T. RPI, Runger, G., Arizona State Univ. – Statistical Process Control using Run Sums
10:30 - 10:45	Break		
10:45 - 12:15	Reliability and DOE Applications (Auditorium)	Design of Experiments I (Conf. Rm. 1)	Non-Normal Data (Conf. Rm. 2)
	L. Harrison, GE Indust. Sys – UR Power Supply Analysis for Reliability Prediction M. Brey, GE Appliances – Reliability Analysis for the Brake Hub Isolator D. Chokshi, Pratt & Whitney – Statistical DOE Applied to A Rocket Thrust Chamber Brazing Process	T. N. Goh, National Univ. of Singapore - Enhancing the 'Design' Process in Design of Experiments J. Lucas, Lucas and Assoc. – Random Run Order Without Resetting Factors for Efficient Six-Sigma Experiments J. Cawse, N. Doganaksoy, C. Hansen, R. Mattheyses, C. Pisupati, T. Repoff, C. Stanard, W. Tucker, GE CRD – Combinatorial Search and Experimental Design Techniques	H. A. Mohsen, Ford, E. Cekecek, Wayne State Univ. – Comparison of Edgeworth and Burr's Methods in Evaluation of Non-Normal Process Capability Indices J. Rutledge, Data Vision, Inc., B. Warner, US Air Force Academy – Using the Beta Distribution on Confidence Intervals for Proportions A. Shaiegan, B. Wunderlin, GE – The Normal Distribution with Six Sigma Projects
12:15 - 1:15	**Lunch**		
1:15 - 2:15 Auditorium	**Invited Speaker: Ron Snee, Management Consultant Title: The Impact of Six Sigma Today And In The Future Session Chair: Mark Stewart, GE CRD**		
2:20 - 3:50	Engineering Applications (Auditorium)	Design of Experiments II (Conf. Rm. 1)	Probabilistic Modeling (Conf. Rm. 2)
	T. Early, R. Neagu, GE – Random and Fixed Factors in Measurement System Studies A. Elasser, S. Ramakrishnan, L. Stevanovic, C. Korman, GE CRD – Six Sigma Electronics Toolbox G. A. Finn, Prescient Technologies – Six Sigma in the Engineering Design Process: Improving the Quality of the Engineering Product	C. Anderson-Cook, Virginia Tech – Understanding the Influence of Several Factors on a Cylindrical Response R. McGrath, D. Lin, Penn State Univ.– The Confounding Relationship of Location and Dispersion Effects in Unreplicated Fractional Factorials P. Cadima, GE – Central Composite Response Surface and Analysis	L. Wang, K. Gau, H. Bond, J. Vishnauski, D. Beeson, D. Carpenter, B. Striebich GE – Fast Probability Integration (FPI) and Its Applications to DFSS K. Gau, L. Wang, H. Bond, J. Vishnauski, D. Beeson, D. Carpenter, GE – Improve Designs Using Probabilistic Sensitivity Information P. Morse, GE CRD – Planning an Accelerated Degradation Test
3:50 - 4:05	Break		
4:05 - 5:05	**Invited Speaker: Michèle Boulanger, Motorola Title: Six Sigma and Beyond: Technical Challenges Session Chair: Tim Keyes, GE CRD**		
5:05 - 6:15	**Poster Session (5:05) and Special Interest Sessions (5:30)**		
6:15 - 7:30 7:30 - 8:30	**Dinner Mixer and Special Interest Sessions**		

Friday, May 21, 1999			
8:00 - 8:30	**Continental Breakfast**		
8:30 - 9:30	**Invited Speaker: William Hill, AlliedSignal** **Title: Six Sigma - The AlliedSignal Experience** **Session Chair: Mark Sneeringer, GE CRD**		
9:30 - 11:00	Experimental Design (Auditorium)	Optimization (Conf. Rm. 1)	Eclectics (Conf. Rm. 2)
	M. Hayes, GE, J. Zaczyk, Shainin Consultants – Problem Solving Using Shainin Methodology and Philosophy: A Case Study G. Johnson, Foxboro – Utilizing Classical DOE to Enhance a Component Search Strategy D. Bergsten, J. Roberston, D. Rumpf, GE Aircraft Engines – Improving Measured Fuel Flow Accuracy in Jet Engine Test Cells	S. Bisgaard, Univ. of St. Gallen – Quality Economics C. Moreno, Ultramax Corp. – Improvements Through Process Adjustments P. Sullo, RPI, M. VanDeven, Nabisco – Optimal Adjustment for Processes with Run-to-Run Variation	A. Wu, Ai-Chu Wu Teaching & Consulting Services, M. Adair, J. Gould, Hewlett-Packard – The Power of Synergy: Using Survival Analysis for Business Forecasting J. Hershey, GE Aircraft Engines, B. Osborn, GE CRD – Advanced Methods in Statistical Reliability: Quantifying Business Risk R. Agrawal, GE CRD – What I Learned in My First Two Years As an Industrial Statistician
11:00 - 11:15	Break		
11:15 - 12:15	**Closing Panel Discussion: M. Boulanger, B. Godfrey, W. Hill, J. S. Hunter, W. Meeker, R. Snee** **Session Chair: Roger Hoerl, GE CAS**		
12:15 -	**Lunch; Depart for Tour (Previous Registration Required)**		

Officers of Sponsoring Organization:
American Statistical Association Quality and Productivity Section (ASA Q&P)
Chair: Tom Boardman, Colorado State University
Chair-Elect: Geoffrey Vining, University of Florida
Secretary: Lisa Custer, Motorola
Treasurer: LeRoy Franklin, Indiana State University

Conference Co-Sponsored by General Electric Corporate Research and Development (GE CRD) and Rensselear Polytechnic Institute (RPI)

1999 American Statistical Association
Quality and Productivity Research Conference (ASA QPRC) Committee

Conference Chairs:
Tim Keyes, GE Corporate Research and Development
Angela Neff, GE Corporate Research and Development

Program Chairs:
Necip Doganaksoy, GE Corporate Research and Development
Gerry Hahn, GE Corporate Research and Development
Roger Hoerl, GE Corporate Audit Staff
Tom Willemain, Rensselaer Polytechnic Institute

Session Chairs Include:
Kent Cueman, GE CRD; Necip Doganaksoy, GE CRD; William Hill, AlliedSignal; Roger Hoerl, GE CAS; Scott Lasater, GE Industrial Systems; James Loman, GE CRD; Mark Preston, GE CRD; Karen Riding, GEP; Josef Schmee, Union College, Pat Sullo; Tom Willemain, GE CRD; David Woodruff, GE CRD; John Zaczyk, GE Transportation Systems; Steve Zinkgraf, Sigma Breakthrough Technologies

Other Conference Organizing Committee Members:
Pat Sullo, Rensselear Polytechnic Institute
Janet Bennett, Martha Gardner, Phyllis Liu, Victor Morin, Peter Morse, Bruce Pomeroy, Grace Shriver, and Christopher Stanard, GE CRD