

Statistical Sciences (CCS-6)
Self-Assessment Appendix
January 2007 — January 2008

1. List of books and publications in peer-reviewed journals; most significant publications are denoted by an*

2. List of publications in conference proceedings; most significant publications are denoted by an *.

S. Steiner, M. Hamada, B. Giddings, V. Kutsyy, S. Mosesova, and G. Salloum, G. "A Robust Bubble Solution Via Mixture Experiments." *Journal of Statistical Education*, 15, 1 (2007).
www.amstat.org/publications/jse/v15n1/steiner.html

T. Graves, M. Hamada, J. Booker, M. Decroix, K. Chilcoat, and C. Bowyer, "Estimating a Proportion Using Stratified Data Arising from Both Convenience and Random Samples." *Technometrics*, 49, 164-171 (2007).

T. Graves, M. Hamada, R. M. Klamman, A. Koehler, and H. F. Martz, "A Fully Bayesian Approach for Combining Multi-level Information in Multi-state Fault Tree Quantification.," accepted by *Reliability Engineering and System Safety* (2007). doi:10.1016/j.res.2006.11.001.

C. Anderson-Cook, T. Graves, M. S. Hamada, N. Hengartner, V. Johnson, C. S. Reese, and A. G. Wilson, "Bayesian Stockpile Reliability Methodology for Complex Systems with Application to a Munitions Stockpile," accepted by *Military Operations Research Journal*.

T. Burr and J. Doak, "Distribution Free Discriminant Analysis," *Intell. Data Anal.* 11 (2007) pp. 651-662.

T. Burr, J. Gattiker, K. Myers, and G. Tompkins, "Alarm criteria in radiation portal monitoring," *Appl. Radiation Isot.* 65 (2007) pp. 569-580.

N. Hengartner, S. Michalak, B. Takala, and S. Wender, "Evaluating Experiments for Estimating the Bit Failure Cross Section of Semiconductors Using a Colored Spectrum Neutron Beam," *Technometrics*, Vol. 50, No. 1, February 2008, pp. 8-14.

D. Higdon, J. Gattiker, B. Williams, and B. Nakleh, "A Bayesian Calibration Approach to the Thermal Problem," *Journal of Computer Methods in Applied Mechanics and Engineering*, Vol. 197, Issue 29-32, May 1, 2008, pp. 2431-2441.

S. Pickle, T. Robinson, J. Birch, and C. Anderson-Cook, "A semi-parametric approach to robust parameter design," *Journal of Statistical Planning and Inference*, Vol. 138, Issue 1, January 1, 2008, pp. 114-131.

A. Ozol-Godfrey, C. Anderson-Cook, and T. Robinson, "Fraction of design space plots for generalized linear models," *Journal of Statistical Planning and Inference*, Vol. 138, Issue 1, January 1, 2008, pp. 203-219

K. Myers, "A Kalman Filter Primer, Randy L. Eubank," *Journal of the American Statistical Association*, 2007, Vol. 102, p. 384.

3. List of documented unclassified (LA-UR) internal reports; the most significant publications are denoted by *.

S. Habib, K. Heimann, D. Higdon, C. Nakhleh, and B. Williams, "Cosmic Calibration: Constraints from the Matter Power Spectrum and the Cosmic Microwave Background," Los Alamos National Laboratory Report LA-UR-07-0056.

A. Koehler, "Expert Elicitation for Risk Assessment," Los Alamos National Laboratory Report LA-UR-07-0081.

R. Picard and M. Fugate, "Materials Source Identification for Buttons from Rocky Flats, Savannah River, Hanford, and Los Alamos," Los Alamos National Laboratory Report LA-UR-07-0116.

S. Michalak, "ASA Election Bio," Los Alamos National Laboratory Report LA-UR-07-0124.

C. Anderson-Cook, Book Review of "Visual Statistics: Seeding Data with Dynamic Interactive Graphics," Los Alamos National Laboratory Report LA-UR-07-0155.

E. Lawrence, D. Bingham, C. Liu, and V. Nair, "Bayesian Inference for Multivariate Ordinal Data Using Parameter Expansion," Los Alamos National Laboratory Report LA-UR-07-0840.

C. Anderson-Cook, "Model for Multiple Life Cycle Variables," Los Alamos National Laboratory Report LA-UR-07-0199.

J. Wendelberger, "Experiments with Changes in the Design Region," Los Alamos National Laboratory Report LA-UR-07-1360.

J. Wendelberger, "Quantifying Uncertainty in Hydrodynamic Behavior of Spheres in Fluids," Los Alamos National Laboratory Report LA-UR-07-1361.

M. Hamada, T. Graves, R. Klamann, and A. Koehler, "Using Simultaneous Higher-Level and Partial Lower-Level Data in Reliability Assessments," Los Alamos National Laboratory Report LA-UR-07-1562.

S. Michalak, "Data Corruption: A High Performance Computing Perspective from Los Alamos," Los Alamos National Laboratory Report LA-UR-07-1671.

J. Wendelberger, "Statistical Design of Experiments in the Presence of Restrictions and Constraints," Los Alamos National Laboratory Report LA-UR-07-1805.

R. Picard, "TA-55 Glove Failures," Los Alamos National Laboratory Report LA-UR-07-2063.

B. Orier, M. Hamada, et al., "Thermogravimetric Round Robin Measurements," Los Alamos National Laboratory Report LA-UR-07-2346.

G. Wilson, "Boundary Objects as Rhetorical Exigence: Knowledge Mapping and Interdisciplinary Cooperation at LANL," Los Alamos National Laboratory Report LA-UR-07-2376.

E. Lawrence, "Network Tomography: State of the Art and Future Directions," Los Alamos National Laboratory Report LA-UR-07-2399.

S. Michalak, S. Poole, D. Dubois, and A. Dubois, "Characterization of Silent Data Corruption Rates Relevant to High Performance Computing Platforms," Los Alamos National Laboratory Report LA-UR-07-2348.

C. Anderson-Cook and A. Wilson, "Analysis and Data Collection Strategies for Multilevel Complex Systems," Los Alamos National Laboratory Report LA-UR-07-2644.

B. Sims and C. Henke, "Stockpile Stewardship and Reliable Replacement," Los Alamos National Laboratory Report LA-UR-07-2837.

E. Lawrence, "Joint Calibration of Multiple Computer Experiments to Multiple Physical Experiments," Los Alamos National Laboratory Report LA-UR-07-2866.

T. Burr, S. Myers, and A. Sood, "Sources of Uncertainty in Computer Models for the Detected Gamma Radiation Emitted from Naturally Occurring Radioactive Materials," Los Alamos National Laboratory Report LA-UR-07-2867.

C. Anderson-Cook, "Reliability Modeling and Analysis of Complex Systems Using Multiple Sources of Data," Los Alamos National Laboratory Report LA-UR-07-2870.

J. Wendelberger, S. Vardeman, N. Leyva-Estrada, and J. Hockett, "Statistical Analysis of Particle Size Data," Los Alamos National Laboratory Report LA-UR-07-2920.

M. Hamada, "A Bayesian Framework for Planning Reliability Experiments," Los Alamos National Laboratory Report LA-UR-07-3089.

C. Anderson-Cook, T. Robinson, and M. Hamada, "Bayesian Analysis of Split-Plot Experiments with Non-Normal Responses for Evaluating Non-Standard Performances Criteria," Los Alamos National Laboratory Report LA-UR-07-3090.

T. Burr, "Statistical Methods in Nuclear Nonproliferation Activities at Declared Facilities," Los Alamos National Laboratory Report LA-UR-07-3395.

E. Lawrence, "Joint Calibration of Multiple Computer Experiments to Multiple Physical Experiments," Los Alamos National Laboratory Report LA-UR-07-3396.

J. Wendelberger and C. Heath, "Quantifying Uncertainty in Hydrodynamic Behavior of Spheres in Fluids," Los Alamos National Laboratory Report LA-UR-07-3397.

W. Press, "Testing Experimental Data Against Huge and Complex Hypothesis Spaces," Los Alamos National Laboratory Report LA-UR-07-3437.

C. Anderson-Cook, C. Borrer, and B. Jones, "Graphical Tools and a Metric for Comparing Designs if the Assumed Response Surface Model has been Misspecified," Los Alamos National Laboratory Report LA-UR-07-3438.

C. Anderson-Cook, "Statistics for the Engineering and Physical Sciences Project Review," Los Alamos National Laboratory Report LA-UR-07-3585.

J. Wendelberger, "Experiments with Changes in the Design Region," Los Alamos National Laboratory Report LA-UR-07-3586.

T. Burr, K. Kuhn, L. Tandon, and D. Tompkins, "Measurements Performance Assessment," Los Alamos National Laboratory Report LA-UR-07-3734.

S. Michalak, "Fatal Soft Errors: Rare Events that can Affect HPC System Reliability," Los Alamos National Laboratory Report LA-UR-07-3984.

R. Picard and T. Burr, "Networking Sensors for Cargo Screening," Los Alamos National Laboratory Report LA-UR-07-3985.

J. Wendelberger, J. Hockett, and W. Meeker, "Methods for Planning Repeated Measures Degradation Studies," Los Alamos National Laboratory Report LA-UR-07-4106.

K. Myers, "Learning from Neuroscience Data," Los Alamos National Laboratory Report LA-UR-07-4154.

A. Wilson, C. Anderson-Cook, and A. Huzurbazar, "Analysis and Data Collection Strategies for Multilevel Complex Systems," Los Alamos National Laboratory Report LA-UR-07-4310.

N. Hengartner, S. Michalak, B. Takala, and S. Wender, "Evaluating Experiments for Estimating the Bit Failure Cross Section of Semiconductors Using a Colored Spectrum Neutron Beam," Los Alamos National Laboratory Report LA-UR-07-4374.

C. Anderson-Cook, Book Review of "Data Analysis and Graphics Using R: An Example-Based Approach," Los Alamos National Laboratory Report LA-UR-07-4441.

C. Anderson-Cook, Book Review of "Experimental Design: Exercises and Solutions," C. Anderson-Cook, Book Review of "Data Analysis and Graphics Using R: An Example-Based Approach," Los Alamos National Laboratory Report LA-UR-07-4441.

4442.

A. Wilson, "LANL Needs and Priorities for Enhanced Surveillance," Los Alamos National Laboratory Report LA-UR-07-4558.
C. Anderson-Cook, "Resource Allocation Strategies for Reliability of Complex Systems," Los Alamos National Laboratory Report LA-UR-07-4870.
C. Anderson-Cook, "The Benefits of a Split: Should You be Considering a Split-Plot Design?" Los Alamos National Laboratory Report LA-UR-07-5121.

T. Burr and K. Budlong-Sylvester, "Statistical Challenges in Integrated Nuclear Safeguards," Los Alamos National Laboratory Report LA-UR-07-5195.
R. Klamann, "YATLAN User Guide," Los Alamos National Laboratory Report LA-UR-07-5205.
T. Graves and S. Vander Wiel, "Instantaneous and Gradual Changes to Contours," Los Alamos National Laboratory Report LA-UR-07-5266.
S. Michalak and J. Daly, "LANL HPC Interim Metrics," Los Alamos National Laboratory Report LA-UR-07-5399.
S. Michalak and J. Daly, "LANL HPC Interim Metrics Report Quarter 2 FY07," Los Alamos National Laboratory Report LA-UR-07-5400.
M. Hamada and B. Weaver, "A Bayesian Approach to the Analysis of Industrial Experiments: An Illustration with Binomial Count Data," Los Alamos National Laboratory Report LA-UR-07-5529.