Statistical Sciences (D-1)
Self-Assessment Appendix
January 2003 — January 2004

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

   Bennett, T., Booker, J., Keller-McNulty, S., Singpurwalla, N. (2003). "Testing the Untestable: Reliability in the 21st Century," *IEEE Transactions on Reliability*, 52:1, pp 118-124.

   Burr, T.L., Coulter, C.A., Howell, J., Wangen, L.E., "Solution Monitoring: Quantitative and Qualitative Benefits to Nuclear Safeguards, *Journal of Nuclear Science and Technology,* 40(4):256-263 (April 2003).

   Burr, T.L. Gattiker, J.R., and Gerrish, P.J., "An investigation of error sources and their impact in estimating the time to the most recent ancestor of spatially and temporally distributed HIV sequences, *Statistics in Medicine*, 22(9):1495-1516 (May 2003).

   Burr, T.L., Hemphill, G.M., Longmire, V., Smith, M., "The Impact of Combining Nuclear Material Categories on Uncertainty," *Nuclear Instruments and Methods in Physics Research*, 505:707-717 (2003).

   Campbell, K., Wolfsberg, A., Fabryka-Martin, J., and Sweetkind, D., "Chlorine-36 Data at Yucca Mountain: Statistical Tests of Conceptual Models of Unsaturated-Zone Flow," *Journal of Contaminant Hydrology*, 62-63:43-61 (April – May 2003).

   Cannon, M., Fugate, M., Hush, D.R., and Scovel, C., "Selecting a Restoration Technique to Minimize OCR Error", *IEEE Transactions on Neural Networks*, 14(3):478-490 (May 2003).

   Graves, T.L., Reese, C.S., Fitzgerald, M. "Hierarchical Models for Permutations: Analysis of Auto Racing Results, *Journal of the American Statistical Association,* 98(462):282-291 (June 2003).

   Ferson, S., Joslyn, C.A., Helton, J.C., Oberkampf, W.L. and Sentz, K., "Summary from the Epistemic Uncertainty Workshop: Consensus Amid Diversity," *Reliability Engineering and System Safety* (To appear in a special issue on Epistemic Uncertainty edited by Jon Helton in 2004).

   Forslund, D., Joyce, E., Burr, T., Picard, R., Wokoun, D., Froman, P., "The Importance of Using Standard Distributed Components for Medical Surveillance for Discovering and Managing a Public Health Threat," *IEEE Engineering in Medicine and Biology Society* (2004, to appear).

Fraser, A.W., Hengartner, N.W., Vixie, K., Wohlberg, B., "Classification Modulo Invariance with Application to Face Recognition," *Journal of Graphical and Computational Statistics*, accepted (December 2003

Fugate, M. and Gattiker, J.R., "Computer Intrusion Detection With Classification and Anomaly Detection, Using SVMs," *International Journal of Pattern Recognition and Artificial Intelligence*, 17(3):441-458 (2003).

Hamada, M.S., Johnson, V., Moore, L.M., and Wendelberger, J.R., "Bayesian Prediction Intervals and their Relationship to Tolerance Intervals," revised version in review by *Technometrics*, tentatively accepted for publication (12/1/03).

Hamada, M.S., Pohl, A., Spiegelman, C., Wendelberger, J.R., "A Bayesian Approach to Calibration Intervals and Properly Calibrated Tolerance Intervals, "*Journal of Quality Technology,*.35(2):194-205 (April 2003).

Hamada, M.S., " On Tolerance Interval Control Limits for Xbar, R, S Charts," *Quality Engineering*, 15:471-487 (2003).

Hamada, M.S., Pohl, A., Spiegelman, C., Wendelberger, J.R., "A Bayesian Approach to Calibration Intervals and Properly Calibrated Tolerance Intervals," *Journal of Quality Technology*, 35:194-205 (2003).

Hengartner, N.W. and Wegkamp, M., "Second Order Asymptotics for M-Estimators Under Non Standard Conditions," *First Erich Lehman Symposium,* Springer-Verlag. Note to editor: This was moved from the conference proceedings

Higdon, D., Kennedy, M., Cavendish, J., Cafeo, J. and Ryne, R.D., "Combining Field Data and Field Simulations for Calibration and Prediction, *SIAM Journal of Computational Science*, to appear.

Johnson, V., Graves, T.L., Hamada, M.S, Reese, C.S., "A Hierarchical Model for Estimating the Reliability of Complex Systems, *Bayesian Statistics,* 7:199-213 (2003).

Keller-McNulty, S. and Wilson, A., "Reliability for the 21st Century," *Mathematical and Statistical Methods in Reliability, Series on Quality, Reliability and Engineering,* eds. B. Lindqvist and K. Doksum. World Scientific, 7:15-30.

Kuske, C.R., Ticknor, L.O., Busch, J.D., Gehring, C.A., Whitham, T.G., "The Pinyon Rhizosphere, Plant Stress, and Herbivory Affect the Abundance of Microbial Decomposers in Soils, *Microbial Ecology*, 45(4):340-352 (May 2003).

Martz, H.F. Hamada, M.S., "Uncertainty in Counts and Operating Time in Estimating Poisson Occurrence Rates," *Reliability Engineering & System Safety*, 80(1):75-79 (April 2003).

Nair, V.N., Escobar, L., Hamada, M.S., "Design and Analysis of Experiments for Reliability Assessment and Improvement," Chapter in *Mathematical Reliability: An Expository Perspective*, Kluwer Academic Publishers, Eds.Soyer, R., Mazzuchi, T., and Singpurwalla, N.

Radnedge, L., Agron, P.G., Hill, K.K., Jackson, P.J., Ticknor, L.O., Keim, P., Andersen, G.L., "Genome Differences that Distinguish Bacillus Anthracis from Bacillus Cereus and Bacillus Thuringiensis, *Applied and Environmental Microbiology,* 69(5):2755-2764 (May 2003).

Reese, C.S., Wilson, A.G., Hamada, M.S., Martz, H.F., and Ryan, K., "Integrated Analysis of Computer and Physical Experiments, *Technometrics*, to appear May 2004.

Santner, T.J., Williams, B.J. and Notz, W.I. "The Design and Analysis of Computer Experiments, Springer, New York (August 2003).

Toh, C.H., Ticknor, L.O., Downey, C., Giles, A.R., Paton, R.C., Wenstone, R., "Early Identification of Sepsis and Mortality Risks through Simple, Rapid Clot-waveform Analysis - Implications of Lipoprotein-Complexed C Reactive Protein Formation, *Intensive Care Medicine,* 29(1):55-61 (January 2003).

Trachtenberg, E., Korber, B., Sollars, C., Kepler, T., Hraber, P., Hayes, E., Funkhouser, R., Fugate, M., Theiler, J., Hsu, M., Kunstman, K., Wu, S., Phair, J., Erlich, H., and Wolinsky, S.,"HLA Class I Functional Supertype Frequencies Correlate with Progression of HIV Disease", *Nature Medicine*, 9(7):928-935 (July 2003).

Wilson, A.G., Hamada, M.S., Reese, C.S., and Martz, H.F., "Integrated Analysis of Computer and Physical Experimental Lifetime Data, Chapter in *Mathematical Reliability: An Expository Perspective*, Kluwer Academic Publishers, Eds.Soyer, R., Mazzuchi, T., and Singpurwalla, N. (2003).

Wilson, A.G., Hamada, M.S., Xu, M., "A Bayesian Approach for Determining Production Performance and Release Specifications in the Presence of Measurement Error," *Journal of Quality Technology*, to appear.

Wilson, G.D. and Ford, J.D., "The Big Chill: A Conversation with Seven Professionals Ten Years After They Graduated with Master's Degrees in Technical Communication." *Technical Communication,* 50(2):145-159 (May 2003).

Wilson, G.D., "Tides of Change: Is Bayesianism the New Paradigm in Statistics?" *Journal of Statistical Planning and Inference.* 113(1):371-374 (April 2003). (The second most downloaded *JSPI* article from January to May 2003.)

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

Booker, J.M., Dolin, R., Faust, C., Hamada, M.S., Najera, L., Reardon, B., and Ross, T., "Engineering Index: An Engineering Certification/Quantification Metric," *Military Operations Research Society Symposium (MORSS),* Quantico, VA (March 2003).

Booker, J.M., Ross, T.J., Reardon, B., Faust, C., Dolin, R., Hamada, M.S., "Engineering Index: An Engineering Certification/Qualification Metric," *Military Operations Research Society Symposium (MORSS),* Quantico, USMC BA (June 2003).

Bremser, J., Lao, K.A., Koby, M., Guzik, J., Adams, P., Wendelberger, J.R., "Specifications Revisited," *NACE 2003 Corrosion in Nuclear Systems*, San Diego, CA (March 2003).

Brillman, J., Joyce, E., Forslund, D., Picard, R., Judd, S., "The Bio-Surveillance Analysis: Feedback, Evaluation and Response (B-Safer)," *Western Region Society of Academic Emergency Medicing Meeting,* Phoenix, AZ (April 2003).

Brillman, L., Joyce, E., Burr, T.L., Forslund, D., Judd, S., "Emergency Department Syndromic Surveillance: Day of Week and Seasonal Effects in Baseline Data," Phoenix, AZ (April 2003).

Burr, T.L., Elliott, C.J., Fry, H.A., McVey, B.D., and Sander, E., "Approximate Posterior Probabilities for System Evaluation of an Image Analysis Problem," *American Statistical Association Meeting* (August 2003).

Burr, T.L., "Statistics Applied to Safeguards," International Training Course, Knoxville, TN (April 2003).

Burr, T.L., "Interim Report on Modernization (Version 2)," Project Review Meeting, Germantown, MD (June 2003).

Cojocaru, D. and Hengartner, N.W., "An Estimation Strategy for Nonlinear EIV Models," *Joint Statistical Meetings*, San Francisco, CA (August 2003).

Doak, J., Schaefer, J., Burr, T.L., "JMOX Review Meeting task 1: Development and Evaluation of NRTA Approaches Using Simulation and Statistical Evaluation," *JMOX Review Meeting*, Tokoyo, Japan (November 2003).

Ferreira, West, Lee, H., Higdon, D., and Bi, "Multi-Scale Permeability Modeling, *Bayesian Statistics 7*, Proceedings of the *Seventh International Meeting* (eds Bernardo, Bayarri, Berger, Dawid, Heckerman, Smith and West, 519-527.

Forslund, D., Umland, E., Brillman, J., Picard, R., Joyce, E., "Results from the Fielding of the B-SAFER System," *American Medical Informatics Association* (2003).

Fugate, M., Christenson, R., and Bedrick, E., "Adjusted Means Plots for Detecting L:ck of FIT in Linear Models," *Justus Seely Memorial Conference*, Coruallis, OR (July 2003).

Graves, T.L. and Kern, J.C., "Software Testing and Reliability Modeling for Army Systems," *Quality and Productivity Research Conference,* Yorktown Heights, NY (May 2003).

Graves, T.L. and Picard, R.R., "Hierarchical Modeling of the Evolution of a Flu Season," *Joint Statistical Meetings*, San Francisco, CA (August 2003).

Hamada, M.S., Keller-McNulty, S.A., Wilson, A.G., Reese, C.S., "Information Models and Inference for Assessing System Reliability," *Briefing for NNSA Meeting*, Las Vegas, NV (December 2003).

Hengartgner, N.W., "Adaptive Estimation for Inverse Problems with Noisy Operators," *Army Conference and at 3rd Meeting on Mathematical Statistics*, Luminy, France.

Hengartner, N.W., "Estimation Strategies for Semiparametric Nonlinear Errors in Variables Models," *Emory University and at Berne University*.

Hengartner, N.W., "Face Recognition Modulo Invariance,"*Joint Statistical Meetings*, San Francisco, CA (August 2003).

Hengartner, N.W., "Screening and Prediction in Computer Experiments," *3rd Modeling and Simulation Subcommittee (MSS)*, Colorado Springs, CO (December 2003).

Higdon, D.M., "A Bayesian Approach for Simulator-based Forecasting, *3rd JANNAF Modeling and Simulation Subcommittee (MSS),* Colorado Springs, CO (December 2003).

Higdon, D., Lee, H.K.H. and Holloman, C. Markov chain Monte Carlo-based approaches for inference in computationally intensive inverse problems, *Bayesian Statistics 7*. Proceedings of the *Seventh Valencia International Meeting*, 181--197, (2003).

Jackson, P.J., Hill, K.K, Ticknor, L.O., Helma, C.H., Okinaka, R.T., "Phylogenetic Diversity within Bacillus Thurigiensis and Bacillus Cereus Isolates: Only One Group has Pathogenic or Toxigenic Properties in Vertebrates," *Society for Invertebrate Pathology*, Burlington VT (July 2003).

Joyce, E., Forslund, D., Picard, R., Burr, T., Todd, E., Brillman, J., "Fielding the Bio-Surveillance Analysis, Feedback, Evaluation and Response (B-Safer) System in Albuquerque, NM," *BTR 2003 3rd Annual Conference,* Albuquerque, NM (March 2003).

Keller-McNulty, S.A., "Information Integration Technology Challenges in Defense Application," *ASA Reno-NV Chapter Meeting*, Reno, NV (November 2003).

Keller-McNulty, S.A., "Information Integration Technology in Support of 21st Century Defense Applications," *Spring Research Conference,* Dayton, OH (June 2003).

Keller-McNulty, S.A., "Statistical Analysis of Massive Data Streams: Overview of a CATS Workshop," *Interface 2003: 35th Symposium on the Interface,* Salt Lake City, UT (March 2003).

Keller-McNulty, S.A., Hengartner, N.W., Wilson, A.G., and Reese, C.S., "Integrated Reliability Assessment," Short Course at Marine Corps Program Department, Fallbrook, CA (February 2003).

Keller-McNulty, S. and Leishman, D. "Surveillance Systems" *Joint Statistical Meetings*, San Francisco, CA (August 2003).

Keller-McNulty, S.A., Wilson, G.D., Koehler, A.C., and Wilson, A.G., "Information Integration Technology for Complex Systems." *Institute for Mathematics and its Applications short course on Complex Systems*, Minneapolis, MN (September 2003).

Koehler, A.C., "Knowledge Integration and D-1 SDE Efforts," *DHS/DMIA Workshop*, Los Alamos, NM (June 2003).

Koehler, A.C., Gonzales-Lujan, J., Tompkins, G., Burnside, R., "From Process Block-Flow to Immersive 3D: Simulation Lessons and Challenges," *2003 Winter Simulation Conference*, New Orleans, LA (December 2003).

Leishman, D.A., "A Bayesian Approach for Model Calibration and Simulator-based Forecasting," *3rd JANNAF Modeling and Simulation Subcommittee (MSS)*, Colorado Springs, CO (December 2003).

Leishman, D.A., "Homeland Security: Computational and Statistical Challenges," *Interface 2003 Conference,* Salt Lake City, UT (March 2003).

Leishman, D.A., " Knowledge Discovery and the Military, "*Army Conference on Applied Statistics (ACAS),* Napa Valley, CA (October 2003).

Leishman, D.A. and McNamara, L., "Information Integration Technology: Knowledge Representation and Bayesian Statistics for Predictive Modeling," *3rd Modeling and Simulation Subcommittee (MSS)*, Colorado Springs, CO (December 2003).

Linkletter, C., Bingham, D., Sitter, R., Higdon, D.M., Hengartner, N.W., "Comparing Designs of Experiments for Screening and Prediction in Computer Experiments," *3rd JANNAF Modeling and Simulation Subcommittee (MSS) meeting*, Colorado Springs, CO (November 2003).

Longmire, V.L., Roybal, G.S, Hemphill, G.M, Burr, T.L., "Evaluation of Trends in Inventory Difference," *Institute of Nuclear Management - 4th Annual* (February 2003).

Martz, H.F. and Hamada, M.S., "Uncertainty in Counts and Operating Time in Estimating Poisson Occurrence Rates," *ICRSA 2003 Conference*, Columbia, SC (May 2003).

Martz, H.F. and Parker, R.L., "A Tutorial Introduction to Genetic Algorithms," *Joint Statistical Meetings*, San Francisco, CA (August 2003).

McKay, M.D., "About Prediction Uncertainty," *Workshop on the Elements of Predictability,* Baltimore, MD (November 2003).

McKay, M.D., Emerging Issues in Quantification of Prediction Uncertainty," *3rd Modeling and Simulation Subcommittee (MSS),* Colorado Springs, CO (December 2003).

McKay, M.D., Campbell, K., Higdon, D.M., Moore, L.M., "Emerging Issues in Uncertainty Quantification," where? (March 2003).

Michalak, S.E., "Using Parallel Game Scenarios to Gain Better Information about Responses to Emerging Situations," *Joint Statistical Meetings*, San Francisco, CA (August 2003).

Michalak, S.E., "Knowledge Modeling, Data Integration, and Statistical Analysis for a Smallpox Simulation Study," *Joint Statistical Meetings*, San Francisco, CA (August 2003).

Michalak, S.E., "Knowledge Modeling, Data Integration, and Statistical Analysis for Smallpox, Statistics Issues in Counterterrorism, Washington, DC (May 2003).

Moore, L.M., "Computer Experiments: Designs to Achieve Multiple Objectives," *2003 Quality & Productivity Research Conference*, Yorktown Heights, NY (May 2003).

Moore, L.M. and Stephens, T., "Factors Controlling the Aging of S5370, *33rd Annual Polymac Conference,* Amarillo, TX (2003).

Morris, M., Moore, L.M., McKay, M.D., "Large Incomplete Factorial Designs and Uncertainty Analysis of Computer Models," *Joint Statistical Meetings*, San Francisco, CA (August 2003).

Morris, M., Moore, L.M., McKay, M.D., "Incomplete Factorial Designs with Random Levels for Evaluating the Importance of Inputs in Computer Experiments," *Joint Statistical Meetings*, San Francisco, CA (August 2003).

Nakhleh, C.W., "Probability, Prediction, and Certification (U)," *Nuclear Explosives Design Physics Conference*, Los Alamos NM (October 2003).

Papcun, G., Sentz, K., Fulmer, A., Xu, J., Lubeck, O., Wolinsky, M., "A Construction Grammar Approach to Extracting Regulatory Relationships from Biological Literature," [Poster] *Pacific Symposium on Biocomputing* (PSB 2003), Kauai, HI (January 2003).

Picard, R.R., "Monitoring Syndromic Data for Detection of Clandestine Events," *2003 Annual Meeting of WNAR and IMS,* Golden, CO (June 2003).

Shiferl, D., Wilson, G.D., Orler, B.E., Baker, T.R., Hatler, L.E., Larson, S.A., Wrobleski, D.A., Campbell, M.S., and Laintz, K.E., "Kel-F 800—Guiding Decisions for the Next 30 Years, Process Knowledge Capture and Archiving," *September 2003 Los Alamos National Laboratory Energetic Materials Review*.

Sims, B.H., "Science vs. Bureaucracy? Safety and Institutional Culture at Los Alamos," *Society for Social Studies of Science Annual Meeting*, Atlanta, GA (October 2003).

Sims, B.H., "The Eternal and the Ephemeral: Bridges, Disposable Diapers, and the Limits of Technological Change," *Society for the History of Technology Annual Meeting*, Atlanta, GA (October 2003).

Stephens, T.S., Moore, L.M., "Factors Controlling the Aging of S5370," *Enhanced Surveillance Annual Review*, Livermore, CA (April 2003).

Ticknor, L.O., Jackson, P., Hill, K., Helma, C., "Amplified Fragment Length Polymorphism (AFLP) Analysis of Bioforesnics Demonstration and Application Program (BDAP) Samples," *Bioforensics Round Robin Workshop*, Arlington, VA (November 2003).

Ticknor, L.O., Jackson, P., Hill, K., Okinaka, R., "Developing AFLP Signatures for Sample Identification and to Provide a Phylogenetic Context for Advanced Signature Development," Annual Review, Arlington, VA (June 2003).

Umland, E., Brillman, J., Koster F., Picard, R., "Fielding the Bio-Surveillance, Analysis, Feeedback, Evaluation and Response (B-SAFER) System," *2003 Conference on Biological Threat Reduction*, 185-190.

Wendelberger, J.R., "Collaborations That Work!," *Spring Research Conference on Statistics in Industry and Technology*, Dayton, OH (June 2003).

Wendelberger, J.R., "Prediction and Bounding of Degradation Paths," *Joint Statistical Meetings*, San Francisco, CA (August 2003).

Wendelberger, J.R., Keller-McNulty, S.A., Graves, T.L. and Moore, L.M., Hanrahan, R., Wang, L., and Necker, C., Bremser, J., Phillips, J., "Corrosion and Aging II: Statistical Studies Impact for CSAs (U)," poster presented at the 2003 Enhanced Surveillance Conference by Sallie Keller McNulty.

Williams, B., Santner, T., Notz, W., "Sequential Experimental Design of Computer Experiments," *3rd JANNAF Modeling and Simulation Subcommittee (MSS),* Colorado Springs, CO (December 2003).

Wilson, A.G. "Information Integration for Stockpile Surveillance. Contributed paper at *U. S. Army Conference on Applied Statistics (ACAS)*, Napa, CA (October 2003).

Wilson, A.G., "Beyond Batting Averages: Statistics and Big Science," National Youth Science Group, Bartow, WY (July 2003).

Wilson, A.G. and Harris, M., "Control Charts and Trees," Student Seminar at North Carolina State University, Lexington, NC (September 2003).

Wilson, A.G., Hengartner, N.W., and Keller-McNulty, S.A., "Munitions Stockpile Reliability Assessment," *DOD/DOE Munitions MOU TCG-XIV Meeting Proceedings* (February 2003).

Wilson, A.G. and Keller-McNulty, S.A., "Uncertainty Quantification for Complex Engineered Systems," *3rd JANNAF Modeling and Simulation Subcommittee (MSS),* Colorado Springs, CO (December 2003).

Wilson, A.G. and McNamara, L., "Assessing Risks for Complex Systems: A Case Study in Missile Defense," *Joint Statistical Meetings*, San Francisco, CA (August 2003).

Wilson, A.G. and McNamara, L., "Combining Bayesian Networks and System Reliability to Meet Missile Defense Agency Needs," Student Seminar at North Carolina State University, Raleigh, NC (September 2003).

Wilson, A.G., Koehler, A.C., Leishman, D.A., Hengartner, N.W., "Munitions Stockpile Reliability Assessment: May 2003 Progress Update," *TCG-XIV of Joint DoD/DOE Munitions Technology Development Program,* Albuquerque, NM (May 2003).

Wilson, G.D., "Studying the Incommensurability that Unites Us: Persuasion Across Discourse Communities, Persuasion via Boundary Objects," *American Association for the Rhetoric of Science and Technology/National Communication Association Meetings,* Miami, FL (November 2003).

Wilson, G.D., "Boundary Objects and Persuasion Across Discourse Communities," *Project on the Rhetoric of Inquiry (POROI),* University of Iowa (November 2003).

Wilson, G.D., "The Impact of Rhetorical Thinking/Training/Research: Beyond the Borders of the University/Classroom," *University of Iowa, Communications Department* (November 2003).

Wilson, G.D. and Michalak, S.E., "Quantifying the Apocalypse." *27th Annual Meeting of the Society for the Social Studies of Science*, Atlanta, GA (October 2003).

Wilson, G.D., Leishman, D.A., McNamara, L., Koehler, A.C., and Sims, B.H., "Knowledge Modeling and Integration at Los Alamos National Laboratory," *Joint Statistical Meetings*, San Francisco, CA (August 2003).

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

Atkins, K., Barrett, C., Beckman, R., Bisset, K.R., Eubank, S., Hengartner, N., Istrate, G., Kumar, A., Marathe, M.V., Mortveit, H., Reidys, C., Romero, P.R., Smith, J.P., Stretz, P., Englehart, C., Drozda, M., Morin, M., Pathak, S., Zust, S., "NISAC Telecom Sector: Integrated Tool for end-to-end Analysis of Extremely Large Next Generation Telecommunication Networks (Adhopnet), Los Alamos National Laboratory Report LA-UR -03-1886.

Atkins, K., Barrett, C., Beckman, R., Bisset, K.R., Eubank, S., Hengartner, N., Istrate, G., Kumar, A., Marathe, M.V., Mortveit, H., Reidys, C., Romero, P.R., Smith, J.P., Pistone, R., Stretz, P., "NISAC Telecom Sector: Integrated Tool for end-to-end Analysis of Extremely Large Next Generation Telecommunication Networks (Adhopnet)," Los Alamos National Laboratory Report LA-UR -03-1627.

Atkins, K., Barrett, C., Beckman, R., Bisset, K.R., Eubank, S., Hengartner, N., Istrate, G., Kumar, A., Marathe, M.V., Mortveit, H., Reidys, C., Romero, P.R., Smith, J.P., Stretz, P., Englehart, C., Drozda, M., Morin, M., Pathak, S., Zust, S., Rayi, S.S., "Adhopnet: Integrated Tools for end-to-end Analysis of Extremely Large Next Generation Telecommunication Networks (Volume 1)," Los Alamos National Laboratory Report LA-UR -03-2076.

Atkins, K., Barrett, C., Beckman, R., Bisset, K.R., Eubank, S., Hengartner, N., Istrate, G., Kumar, A., Marathe, M.V., Mortveit, H., Reidys, C., Romero, P.R., Smith, J.P., Stretz, P., "Adhopnet: Integrated Tools for end-to-end Analysis of Extremely Large Next Generation Telecommunication Networks (Volume 2)," Los Alamos National Laboratory Report LA-UR -03-2077.

Barrett, C. and Beckman, R., "Urban Population Mobility Simulation (Upmost): Volume One—Project Description," Los Alamos National Laboratory Report LA-UR -03-1941.

Barrett, C., Beckman, R., Bisset, K.R., Bush, B., Eubank, S., Marathe, A., Marathe, M.V., Stretz, P., Sydoriak, S., "National Infrastructure Simulation and Analysis Center (NISAC), Part I, Software Development Framework," Book Review, Los Alamos National Laboratory Report LA-UR -03-1626.

Barrett, C., Beckman, R., Berkbigler, K., Bisset, K.R., Bush, B., Campbell, K., Eubank, S., Hansen, K., Hurford, J., Kubicek, D., Marathe, M.V., Romero, P.R., Smith, J.P., Smith, L.L., Stretz, P., "Urban Population Mobility Simulation (Upmost): Volume Three—Constraint," Los Alamos National Laboratory Report LA-UR -03-1749.

Barrett, C., Beckman, R., Berkbigler, K., Bisset, K.R., Bush, B., Campbell, K., Eubank, S., Hansen, K., Hurford, J., Kubicek, D., Marathe, M.V., Romero, P.R., Smith, J.P., Smith, L.L., Stretz, P., "Urban Population Mobility Simulation (Upmost): Volume Two—Entity Generation," Los Alamos National Laboratory Report LA-UR -03-1748.

Barrett, C., Beckman, R., Berkbigler, K., Bisset, K.R., Bush, B., Campbell, K., Eubank, S., Hansen, K., Hurford, J., Marathe, M.V., Romero, P.R., Smith, J.P., Smith, L.L., Stretz, P., Thayer, G., "Transportation Analysis Simulation System (TRANSIMS), Volume One— Project Description," Los Alamos National Laboratory Report LA-UR -03-1970.

Brillman, J., Burr, T., Picard, R., Umland, E., Joyce, E., "Modeling Emergency Department Visit Patterns for Infectious Disease Complaints: Results and Application to Disease Surveillance," *Academic Emergency Medicine*, LA-UR-03-8574, submitted.

Booker, J.M. and McNamara, L., "Expert Knowledge in Reliability Characterization: A Rigorous Approach to Eliciting, Documenting, and Analyzing Expert Knowledge," Engineering Design Reliability Book, LA-UR-03-2368.

Booker, J.M. and McNamara, L., "Solving Black Box Computation Problems Using Expert Knowledge Theory and Methods," *Reliability Engineering and System Safety (RESS),* LA-UR-03-3840*,* submitted.

Booth, S. R., McNulty, M.S., Nuckols, M.M., and Wilson, G.D., "Analysis of Nuclear Radiography Options at Los Alamos National Laboratory," Los Alamos National Laboratory Report LA-CP-03-0618.

Burr, T.L. and Gattiker, J., "The Adjusted Running Book Inventory Method for Poorly Measured Inventory in Pyrochemical Reprocessing," Japan Nuclear Cycle Development Institue, LA-UR-03-7888.

Burr, T.L., Krik, M., Mielke, A., "Statistical Evaluation of Two Multi-band Triggering Systems: An Application of Conditional Variance," Los Alamos National Laboratory Report LA-UR -03-8532.

Cavalier, L. and Hengartner. N., "Adaptive Estimation for Inverse Problems with Noisy Operators," *Mathematical Methods in Statistics*, submitted.

Cavalier, L. and Hengartner, N.W., Estimating Linear Functionals in Poisson Mixture Models," *Statistics Journal,* LA-UR-03-0644, submitted.

Cavalier, L. and Hengartner, N.W., "Estimating Linear Functionals in Poisson Mixture Models," *Journal of Nonparametric Statistics,* LA-UR-03-3660, submitted.

Chowell, G., Hengartner, N., Castillo-Chavez, C., Hayman, M. and Femimore, P.W., "Ebola Hemorrhagic Fever: Epidemic Modeling and Estimation," *Journal of Mathematical Epidemiology*, submitted.

Ferson, S., Kreinovich, V., Ginsberg, L., Meyer, D.S., Sentz, K., "Constructing Probability Boxes and Dempster-Shafer Structures" SAND Report 2002-4015, *Sandia National Laboratories*, January 2003.

Graves, T.L. and Hamada, M.S., "Making Inferences with Indirect Measurements," *Quality Engineering,* LA-UR-03-7367, submitted.

Graves, T.L. and Picard, R.R., "Seasonal Evolution of Influenza-Related Mortality," *Biometrics Journal,* LA-UR-03-1237, submitted.

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4. **Membership in Professional Organizations with notations for elected officers (*).**

American Anthropological Association
American Association for Rhetoric of Science and Technology
American Association for the Advancement of Science
American Nuclear Society
American Sociological Association
*American Statistical Association (ASA)
*Interface Foundation of North America
Institute for Operations Research and the Management Sciences (INFORMS)
*Institute of Mathematical Statistics
Institute of Nuclear Material Management
*International Society for Bayesian Analysis (ISBA)
International Test and Evaluation Association
Mathematical Association of America
Military Operations Research Society
Operations Research Society of America
Rhetoric Society of America
Sigma Pi Sigma Physics Honor Society
Society of Environmental Toxicology and Chemistry
Society for the History of Technology
Society for Industrial and Applied Mathematics (SIAM)
Society for Social Studies of Science
The Society for Risk Analysis

5. **List of professional society memberships (committees, review panels, etc.) with notations for elected office or honorary positions held.**

Tom Burr

- Referee for Statistics in Medicine; Nuclear Material Management; IEEE Transactions on Man, Systems, Cybernetics; and Nuclear Instruments and Methods in Physics Research

Todd Graves

- Secretary/Treasurer of the American Statistical Association's Section on Statistical Graphics
- Associate editor for Journal of Computational and Graphical Statistics
- Referee for Empirical Software Engineering
- Member of the Program Committee of the 10th IEEE International Software Metrics Symposium (Metrics 2004).

Nick Hengartner

- Vice President of the ASA Advisory Committee to the Energy Information Agency

Dave Higdon

- Executive Board Member of the International Society of Bayesian Analysis (ISBA)

Sallie Keller-McNulty

- Chair of the National Academy of Sciences' Committee on Applied and Theoretical Statistics, 2001 – 2003
- Member of the National Academy of Sciences' Board on Mathematical Sciences and its Applications, 2001 – 2003
- Member of the Committee on National Statistics Panel on the Research on Future Census Methodology, 1999 – 2003
- Executive Committee of the National Institute of Statistical Sciences Member, 1999 – 2003
- Member of NRC/NIST Information Technology Laboratory Review Team – chair the Statistics Engineering Division sub-committee, 2002 – 2004
- Member of NCAR Geostatistical Sciences Project Review Team, 2001 – 2003
- Member of the National Advisory Committee for SAMSI (Statistical and Applied Mathematical Sciences Institute)
- Associate Editor, Statistical Science – 2001 – present
- Co-Chair, with Alyson Wilson, for the Fourth International Conference on Mathematical Methods in Reliability
- Member of the Carnegie Mellon University President's Advisory Panel for the Department of Statistics

- Member of the SIAM Science Policy Board
- Chair of Committee of Presidents of Statistical Societies
- Member of Scientific Committees for: JANNAF 2003 Conference, Foundations '04 Conference, and ASA/INFORMS OR/Statistics Interface Workshop

Elizabeth Kelly

- National Science Foundation (NSF) Advisory Committee for Environmental Research and Education (AC-ERE)
- National Science Foundation Advisory Committee for Government Performance Assessment (AC/GPA)
- Chair of the Committee of Visitors (COV) for the National Science Foundation Biocomplexity Focus Area

Michael McKay

- Associate Editor, Reliability Engineering and System Safety
- Contributing Editor, Current Index to Statistics

Sarah Michalak

- Vice President of the Albuquerque Chapter of the American Statistical Association (September 2003 – August 2004).

C. Shane Reese

- Associate Editor, Communications in Statistics

Benjamin Sims

- Program Committee Member for the 2003 Annual Meeting of the Society for Social Studies of Science

Joanne Wendelberger

- 2004 Chair-Elect of the ASA Section on Physical & Engineering Sciences (elected during 2003)
- Chair of the American Statistical Association, W. J. Youden Award in Interlaboratory Testing Committee (appointed by ASA president)
- Spring Research Conference on Statistics in Industry and Technology, Conference Management Committee (appointed position)
- Technometrics, Associate Editor
- Workshop presenter, joint with L. Moore, for the Expanding Your Horizons Technical Workshop for Young Women.

Alyson Wilson

- Member of the National Academy of Sciences Panel on the Operational Test Design and Evaluation of the Interim Armored Vehicle, 2001-2003
- Member of the American Statistical Association Committee on Statisticians in Defense and National Security, 2000-2005
- President and Webmaster (2002-2003) Albuquerque Chapter, American Statistical Association
- Member of the Organizing Committee for the U.S. Army Conference on Applied Statistics, 2000-2005
- Secretary/Treasurer, American Statistical Association Section on Statistics in Defense and National Security 2004-2006
- Co-Chair, Mathematical Methods in Reliability Conference
- Member of the Los Alamos National Laboratory Fellows Selection Committee
- Reviewer for Mathematical Geology and Journal of Statistics Education

Greg Wilson

- Review for the Journal of Business and Technical Communication special issue on critical practice
- Member of the program committee for the 2002 Conference for the Society for Social Studies of Science

6. **List of Awards, Honors, Elections to national science and engineering societies**

Todd Graves

- YADAS (Yet Another Data Analysis System) is a Java software package for statistical analysis using Markov chain Monte Carlo. Its goal is to be extensible enough to handle any statistical problem. It is being developed by Todd Graves, and D-1 recently received permission for an open source release (LA-CC-03-16) and it has been registered with the US Copyright Office. The source code is just one thing available from the YADAS web site yadas.lanl.gov.

Michael Hamada

- R&D 100 Award – PowerFactoRE
- Defense Programs Award (for significant contribution to the stockpile stewardship program – 1K Valve Test SFI
- Defense Programs Award – Engineering Index Methodology

Sallie Keller-McNulty

- National Associate of the National Academy of Sciences

Harry Martz

- R&D 100 Award – PowerFactoRE

Sarah Michalak

- Distinguished Performance Award for the December 2002 LANL ASCI Milestone thru Deployment and Integration of the ASCI Q Machine (awarded late 2003).
- Large group Distinguished Performance Award as part of the Advanced Simulation and Computing (ASCI) Q Team.

C. Shane Reese

- 2003 Strategic Management Society Best Paper Award

Margaret Short

- ENAR Distinguished Student Paper Award

Joanne Wendelberger

- National Nuclear Security Administration (NNSA) Award – presented to the B-61 Alt 357 Team by the United States Department of Energy
- 2002 Defense Programs Award of Excellence for work related to the B61 Alt 357 Team - "For significant contribution to the Stockpile Stewardship Program" presented 12/18/2003.

7. **Patents**