Curriculum Vitae

Leslie M. (Lisa) Moore, Ph.D.

January 2023

Current local contact information:
2204 Lester Dr NE, Apt 196, Albuquerque, NM 87112, (505) 690-7701, lmm.ind1@yahoo.com

Employment History

Compa Industries,Inc. LLC, contact: Karissa Pentis, contract services to Statistical Sciences Group, CCS-6, Los Alamos National Laboratory, Los Alamos, NM (LANL CCS-6 Group Leader: Earl Lawrence, CCS-6 Project Lead: Elizabeth Kelly)
Job Title: Scientist 4
Duties: Provide statistical support to project monitoring and evaluating nuclear material containers performance.

Sandia National Laboratories, Statistics and Data Analytics Department, Org 5574, Albuquerque, NM.
Department Manager: Mr. Matthew Smith; Sandia Contractor contact: Dr. Adele Doser
Job Title: PO Contractor (sole proprietor), 2020 to 2022
Duties: Providing expert design of experiment services for the MGT project (Dr. Lyndsay Shand, Org 5573) and AM efforts (Ms. Lauren Wilson, Org 5574) including collaboration on data collection and analyses, supporting report writing, preparation of presentations.

Sandia National Laboratories, Statistical Sciences Department, Org 5573, Albuquerque, NM.
Manager: Dr. Adele Doser
Job Title: R&D S&E, Mathematics Distinguished, 2019 to 2020
Duties: Statistics research in support of SNL missions including design and analysis of physical experiments for additive manufacturing production process design and weapons systems components, design and analysis of simulation experiments including sensitivity and uncertainty quantification for waste repository assessment.

Los Alamos National Laboratory, Statistical Sciences Group, CCS-6, Los Alamos, NM.
CCS-6 Group Leader: Dr. Jim Gattiker; Compa Industries Inc. contractor contact: Mr. Terry McCabe
Job title: Guest Scientist 2012 to 2022; Statistical Specialist with Compa Industries, Inc. 2015-2019;
Duties: Statistics research and collaboration with Research Scientists in CCS-6

Los Alamos National Laboratory, Statistical Sciences Group, CCS-6, Los Alamos, NM.
CCS-6 Group Leader: Dr. Joanne Wendelberger (previous group managers: Dr. Sallie Keller (1998-2005), Dr. David Higdon (2005-2010))
Job title: Research Scientist IV, 1998-2012; Duties: Statistics research to support consulting and collaboration on projects involving Weapons Physics, Enhanced Surveillance, Nonproliferation, Carbon Capture, Energy, Critical Infrastructure Protection and other programs of national security interest.

Comforce Technical Services, Inc., Albuquerque, NM.
Lab supervisor: Dr. Sallie Keller-McNulty (Dr. Jane Booker), Contractor contact: Ms. Rose Ann Casale
Job title and dates: Technical Staff Member, 1992-1998; Duties: Statistical consulting on projects for Los Alamos National Laboratory in association with the Statistics group, D-1, at the Laboratory.

Institute of Statistics and Decision Sciences (ISDS), Statistics Consulting Center (SCC), Duke University, Durham, NC.
ISDS Head: Dr. Mike West, SCC Director: Dr. Valen Johnson
Job title and dates: Assistant Research Professor, 1994-1995; Duties: Responsible for all activities of SCC providing short-term statistical consulting and on-call advice to faculty and student researchers

Los Alamos National Laboratory, Statistics Group, A-1, Los Alamos, NM.
Group Leader: Dr. Jane Booker (previous group managers: Dr. Harry Martz, Dr. Richard Beckman)
Job title: Technical Staff Member, 1985-1992; Duties: Statistics research to support consulting and collaboration on Laboratory projects. Projects included experimental design for physical experiments, AA/EEO analysis, and a variety of statistical consulting roles for classified and unclassified projects.

Education

Ph.D. Mathematics, Statistics emphasis, The University of Texas, Austin, TX.
Dissertation: Ordering the Points in Factorial Experiments to Protect against Early Termination,
B.S. with Honors in Mathematics, The University of Texas, Austin, TX.

Professional Organization Memberships, Service and Activity

Member American Statistical Association since 1982 (also Albuquerque chapter, and sections including Joint Physical and Engineering Sciences and Quality and Productivity, Defense and National Security, Statistical Consulting)
Member Royal Statistical Society
2022 Q&P Section Program Chair (2021 Program Chair-elect): contribute to JSM and FTC program planning
Member ASA Fellows Committee, 2019-2021, review nomination packets and select annual Fellows of ASA
Design and Analysis of Experiments (DAE) Conference Steering committee, 2005-2017, Chair 2009-2012
Workshop co-organizer (scientific program chair), 2005 Workshop on Design and Analysis of Experiments, DAE 2005, Santa Fe, NM
Invited participant, program on Design of Experiments at Isaac Newton Institute for Mathematical Sciences, Cambridge, UK, July 21 - Aug 15 2008
Senior Newsletter Editor for ASA joint section SPES/Q&P. 1998-2000

Awards

Six Sigma Master Black Belt. Trained October 2008 – May 2009 by Straight Line Performance Solutions, LLC president Mark Zabel. Project: Implementation of a Performance Assessment Tool for High Performance Computing
2009 Los Alamos National Laboratory Distinguished Performance Award, H1N1 Analysis Team
2010 Los Alamos National Laboratory Achievement Award for contributions to the CCS-6 Student Program
2013 Don Owen Award, San Antonio Chapter of the ASA and Taylor and Francis
2014 Fellow of the American Statistical Association, August 2014 JSM

References for Leslie M. (Lisa) Moore, Ph.D.

Professor Emeritus Max Morris, Department of Statistics and Statistical Laboratory, Iowa State University, Ames, Iowa, 515-294-2775, mmorris@iastate.edu
Ms. Lauren Wilson, R&D S&E, Mathematics Principal, Statistics and Data Analytics, Org 5574, Sandia National Laboratories, Albuquerque, NM, 505-845-1011, lcwilso@sandia.gov
Dr. Sallie Keller, Division Director and Professor, Biocomplexity Institute, University of Virginia, Arlington, VA, 434-243-7331, sak9tr@virginia.edu
Dr. David Higdon, Department Head and Professor, Department of Statistics, Virginia Tech University, Blacksburg, VA, 571-858-3120, dhigdon@vt.edu
Dr. Ryan Lekivetz, JMP Principal Research Statistician Developer, SAS, Cary, NC, 919-531-6827, rlekivetz@gmail.com
Professor Emeritus Mark Johnson, Statistics Department, University of Central Florida, Orlando, FL , 407-823-2695 (w), 954-401-6249 (c), mark.johnson@ucf.edu

Research Publications

Refereed Publications

1. "Statistical Mentoring at Early Training and Career Stages" (2017), Anderson-Cook, C. M., Hamada, M. S., **Moore, L. M.**, and Wendelberger, J. R., *The American Statistician*, 71:1, 6-14, DOI: 10.1080/00031305.2016.1200491.
2. "Constructing rigorous and broad biosurveillance networks for detecting emerging zoonotic outbreaks" (2015) Brown, M., **Moore, L.**, McMahon, B., Powell, D., LaBute, M., Hyman, J. M., Rivas, A., Jankowski, M., Berendzen, J., Loeppky, J., Manore, C., Fair, J., *PloS one* 10 (5*),* eo124037, LA-UR 11-10418.
3. "Biological and control measure model parameters used for highly pathogenic H5N1 in Nigeria" (2015), **Moore, Leslie**, Mcmahon, Benjamin, Powell, Dennis, Rivas, Ariel, Jankowski, Mark, Berendzen, Joel, Loeppky, Jason, Manore, Carrie, Fair, Jeanne, Hyman, James M., Brown, Mac, Labute, Montiago, Figshare. http://dx.doi.org/10.1371/journal.pone.0124037.t001.
4. "On Algorithms for Obtaining Orthogonal and Near-Orthogonal Arrays for Main-effects Screening" (2015), Lekivetz, R. Sitter, R., Bingham, D., Hamada, M., **Moore, L.**, Wendelberger, J., *Journal of Quality Technology* 47 (1), 2-13, LA-UR 12-00614.
5. "Design of Computer Experiments: Introduction and Background" (2015), Morris, M. and **Moore, L**., *appears in* ***Handbook of Design and Analysis of Experiments***, eds. Angela Dean, Max Morris, John Stufken, Derek Bingham; Chapman & Hall / CRC Handbooks of Modern Statistical Methods (ISBN 9781466504332).
6. "Using Genetic Algorithms to Design Experiments: a Review" (2014), Lin, C. F. D., Anderson-Cook, C. M., Hamada, M. S., **Moore, L. M.**, and Sitter, R. R., *Quality and Reliability Engineering International,* doi: 10.1002/qre.1591, LA-UR 11-05462.
7. "An Introduction to Statistical Issues and Methods in Metrology for Physical Science and Engineering" (2014), Vardeman, Stephen, Hamada, Michael S., Burr, Tom, Morris, Max, Wenderlberger, Joanne, Jobe, J. Marcus, **Moore, Leslie**, and Wu, Huaiqing, *Journal of Quality Technology*, Vol 46., No. 1, 33-62, LA-UR 11-04736.
8. "Measuring the Uncertainties of Pandemic Influenza" (2012), Fair, Jeanne M., Powell, Dennis R., Leclaire, Rene, **Moore, Leslie M.**, Wilson, Michael, Dauelsberg, Lori R., Samsa, Michael, Deland, S., Hirsch, G., Klare, Perry, and Bush, Brian, *International Journal of Risk Assessment and Management*, Vol 16, No 1/2/3, pp. 1-27, LA-UR-08-06016. (Research noted in Science News section of Science*Daily*, July 2,2012 link http://www.sciencedaily.com/releases/2012/07/120702153107.htm)
9. "Global Sensitivity Analysis for Mixture Experiments" (2011), Loeppky, Jason, Williams, Brian, and **Moore, Leslie**, *Technometrics*, 55, 68-78, LA-UR 11-01763.
10. "Projection array based designs for computer experiments" (2011), Loeppky, Jason, **Moore, Leslie M.**, and Williams Brian, *Journal of Statistical Planning and Inference,* Vol 142, no 6, pps. 1493-1505, LA-UR 11-00724.
11. "Batch Sequential Designs to Achieve Predictive Maturity with Calibrated Computer Models" (2011), Williams, B., Loeppky, J., **Moore, L.**, and Macklem, M., Quantification of Margins and Uncertainty (QMU) special issue *Reliability Engineering & System Safety*, Vol 96, Iss 9, pp. 1208-1219, LA-UR-10-03121.
12. "Batch Sequential Designs for Computer Experiment" (2010), Loeppky, J., **Moore, L.**, and Williams, B., *Journal of Statistical Planning and Inference*, Vol 140, no 6, pp. 1452-1464, LA-UR-09-5818.
13. "Elementary Statistical Methods and Measurements" (2010), Vardeman, S., Hamada, M., Burr, T., Wendelberger, J., **Moore, L.**, Morris, M., Wu, H., and Jobe, J., *The American Statistician*, 64, 46-51, LA-UR-09-0228.
14. "Making Tradeoffs in Designing Scientific Experiments: A Case Study with Multi-Level Factors" (2009), Wendelberger, Joanne R., **Moore, Leslie M.** and Hamada, Michael S., *Quality Engineering*, Vol. 21, Number 2, pp. 143-155, LA-UR-03-8142.
15. "Using Orthogonal Arrays in the Sensitivity Analysis of Computer Models" (2008), Morris, Max D., **Moore, Leslie M.**, and McKay, Michael D., *Technometrics*, Vol. 50, issue 2, pp. 205-215, LA-UR-05-8994.

16. "Factorial Designs with Multiple Levels of Randomization" (2008), Bingham, Derek, Sitter, Randy, Kelly, Elizabeth, **Moore, Leslie**, and Olivas, J. David, *Statistica Sinica*, Vol. 28, issue 2, pp. 493-513, LA-UR-05-7658.
17. "Combining Experimental Data and Computer Simulations with an Application to Flyer Plate Experiments" (2006), Williams, B., Higdon, D., Gattiker, J., **Moore, L.**, McKay, M., and Keller-McNulty, S., *Bayesian Analysis*, 1, 4, pp. 765-792, LA-UR-05-4951.
18. "Sampling Plans Based on Balanced Incomplete Block Designs for Evaluating the Importance of Computer Model Inputs" (2006), Morris, Max D., **Moore, Leslie M.**, and McKay, Michael D., *Journal of Statistical Planning and Inference*, 136, 9, pp. 3203-3220, LA-UR-04-8688.
19. "Combined Array Experiment Design" (2005), **Moore, Leslie M.**, McKay, Michael, and Campbell, Katherine, *Reliability Engineering and Systems Safety Journal*, 91, 10-11, pp. 1281-1289, LA-UR-05-1740.
20. "Bayesian Prediction Intervals and their Relationship to Tolerance Intervals" (2004), Hamada, M., Johnson, V., **Moore, L.** and Wendelberger, J., *Technometrics*, 46, 4, pp. 452-459.
21. "Minimax Distance Designs in Two-level Factorial Experiments" (1995), John, P. W. M., Johnson, Mark E., **Moore, Leslie, M.**, and Ylvisaker, D., *Journal of Statistical Planning and Inference* 44, pp. 249-263, LA-UR-91-2499.
22. "Minimax and Maximin Distance Designs" (1990), Johnson, Mark E., **Moore, Leslie M.**, and Ylvisaker, D., *Journal of Statistical Planning and Inference* 26, pp. 131-148, LA-UR-88-3904.
23. "Approximate One-Sided Tolerance Bounds on the Number of Failures Using Poisson Regression" (1988), **Moore, L. M.**, and Beckman, R. J., *Technometrics*, v.30, no.3, p.283-290, LA-UR-86-1635.
24. "Singular Factorial Designs Resulting from Missing Pairs of Designs Points" (1988), **Moore, L. M.**, *Journal of Statistical Planning and Inference* 19, pp. 325-340, LA-UR-86-0709.

Selected Proceedings Papers

1. "Uncertainty quantification for carbon capture simulation" (2012), **Moore, Leslie M.**, Bhat, Sham, Wendelberger, Joanne R., and Mebane, David, LA-UR 12-00277, *LANL ADTSC Science Highlights 2012*.
2. "Evaluation of a Process Change for Aluminum Laminate Production" (2011), Whitton, Christin S., and **Moore, Leslie M.**, poster presentation and proceedings paper JSM 2011, August 2011, Miami, FL, LA-UR 11-04430.
3. "Statistical Design for Uranium Corrosion Experiments" (2009), Wendelberger, J. and **Moore, L.**, LA-UR-09-0088, *LANL ADTSC Science Highlights 2009*.
4. "Distributions for Case Mortality Rate Based on Historic Pandemic Influenza Death Rates" (2008), Powell, E., Hamada, M., **Moore, L.**, and Powell, D., *JSM 2008 Proceedings, Denver, CO*, Alexandria, VA: American Statistical Association, LA-UR-08-06913.
5. "Sensitivity analysis of an infectious disease model" (2005), Powell, D., Fair, J., LeClaire, R., Moore, L. M., Thompson, D., *Proceedings of the International Systems Dynamics Conference*.
6. "Failure Rate Analysis Using GLIMMIX" (1998), **Moore, Leslie M.**, Hemphill, Geralyn M., and Martz, Harry F., Jr., *Proceedings PSAM 4: Probabilistic Safety Assessment and Management*, New York, 1998, LA-UR-98-1746.

Selected Presentations

1. "Statistical Challenges and Solutions in Physical and Computational Experiments" (2014), Wendelberger, Joanne and **Moore, Leslie M.**, LA-UR 14-25558, **invited** presentation at 2014 Joint Statistical Meetings, August, 2014, Boston, MA.
2. "Statistical Design of a Uranium Corrosion Experiment" (2013), **Moore, Leslie M.**, Wendelberger, Joanne, Dean, Angela, Schulze, Roland, and Hill, Mary Ann, LA-UR 09-06059, contributed presentation at 2013 Quality and Productivity Conference, June 5, 2013, GE Global Research, Niskayuna, NY.
3. "Sampling and Analysis of Scarlatti Sonatas" (2012), Powell, Aubrie M., Key-Campbell, Nina, Morris, Max, Hamada, Michael S., **Moore, Leslie M.**, LA-UR 12-23170, student poster presentation LANL Student Symposium August 2012.

4. "Comparing Mitigation Effects under Uncertainty in a Simulated Influenza Outbreak" (2012), **Moore, Leslie M.**, Powell, Dennis R., Fair, Jeanne M., LeClaire, Rene J., Wilson, Michael, LA-UR 12-26921, **invited** seminar presentation at Texas A&M University – Corpus Christi, November 16, 2012, Corpus Christi, TX.
5. "Comparing Mitigation Effects under Uncertainty in a Simulated Disease Outbreak" (2011), **Moore, Leslie M.**, Powell, Dennis R., Fair, Jeanne M., LeClaire, Rene J., Wilson, Michael, LA-UR 10-00592, **invited** presentation at International Conference on Design of Experiments, May 2011, Memphis, TN and **invited** presentation at Conference for Section on Defense and National Security, May 2012, George Mason University, Fairfax, VA.
6. "Experimental Designs for a Disease Mapping Study" (2011), Loepkky, Jason L., **Moore, Leslie M.**, Brown, Mac G., Fair, Jeanne M., and Powell, Dennis R., LA-UR 11-00833, **invited** presentation at International Conference on Design of Experiments, May 2011, Memphis, TN.
7. "Fair Assignment of Posters to Judges" (2011), Whitton, Christin S., and **Moore, Leslie M.**, LA-UR 11-04891, poster presentation LANL Student Symposium August 2011, *recipient best student poster award in Mathematics* (LA-UR 11-04890, report).
8. "Sequential Computer Experiment Planning: Bin-Based LHS Design" (2009), **Moore, L.**, Loeppky, J., and Williams, B., LA-UR 09-07033, **invited** presentation SRC 2009 (Spring Research Conference, Vancouver, CA, May 2009).
9. "Uncertainty Analysis of Pandemic Influenza Impacts" (2008), Powell, D., Fair, J., LeClaire, R., Dauelsberg, L., **Moore, L.**, Bush, B., Klare, P., Deland, S., Wilson, M., Turk, A., Hirsch, G., Samsa, M., and Molburg, J., LA-UR-08-1473, **invited** presentation at DEMA 2008 (Designed Experiments: Recent Advances in Methods and Applications, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK, August 2008).
10. "Computer Experiment Designs: Achieving Multiple Objectives" (2006), **Moore, Leslie M.**, LA-UR-05-8222, **invited** presentation at Interface Meeting (Pasadena, CA, May, 2006), at DEMA2006 (Designed Experiments: Recent Advances in Methods and Applications, Southampton, UK, Sept. 6-10, 2006), and at Joint Engineering and Methodology Subprograms Workshop of the Statistical and Applied Mathematical Sciences Institute (SAMSI) program on Development, Assessment, and Utilization of Complex Computer Models, Oct. 26-27, 2006, Research Triangle Park, NC.

Selected Technical Reports

1. "Additive Manufacturing: A Case Study for Characterizing Variability, Part 1 Pre-EDM Dimensional Data" (2021), Wilson, Lauren C., **Moore, Leslie M.**, Yee, Joshua K., Ferguson, Ian A. N., Martinez, Manuel A. Lopez, Wakeland, Stephen K., Jankowski, Alan F., SAND2021-7246.
2. "Status Report on Uncertainty Quantification and Sensitivity Analysis Tools in the Geologic Disposal Safety Assessment (GDSA) Frameworks" (2019), Swiler, L. P., Helton, J. C., Basurto, E., Brooks, D. M., Mariner, P. E., **Moore, L. M.**, Mohanty, S., Sevougian, S. D., and Stein, E. R., M2SF-19SN010304031, SAND2019-13835 R.
3. "Methodology Guide for Accelerated Aging Studies" (2015), Collins, David H. Jr., Huzurbazar, Aparna V., Hemphill, Geralyn M. Sewald, **Moore, Leslie Melissa**, Wendelberger, Joanne Roth, Hackenberg, Robert Errol, Labouriau, Andrea, LA-UR-15-27774.
4. "SDC (Silent Data Corruption) Laboratory Testing Experimental Design and Hardware Techniques" (2008), Connor, Carolyn M., Dubois, Andrew J., Dubois, David H., Michalak, Sarah E., and **Moore, Leslie M.**, LA-UR-08-02842.
5. "Uncertainty quantification for combining experimental data and computer simulations" (2004), Higdon, D., Williams, B., **Moore, L**., McKay, M., Keller-McNulty, S., LA-UR-04-6562.
6. "Actuated Signals in TRANSIMS" (2001), Barrett, Christopher L., Beckman, Richard J., Berkbigler, Kathryn P., Bush, Brian W., **Moore, Leslie M**., and Visarraga, Darrin, LA-UR-01-4609.
7. "Statistical Uncertainty Bounds for Polymer Degradation in High Explosives" (1999), **Moore, Leslie M**., and Wendelberger, Joanne R., LA-UR-99-4135.
8. "Statistical Test of Reproducibility and Operator Variance in Thin-section Modal Analysis of Textures and Phenocrysts in the Topopah Spring Member, Drill Hole USW VH-2, Crater Flat, Nye County, Nevada" (1989), **Moore, Leslie M**., Byers, Frank M., Jr., and Broxton, David E., LA-11452-MS, 47p.
9. "Design Guide for Experiments at NTB" (1988), Johnson, Mark E., and **Moore, Leslie M**., LA-UR-88-2590.