

Dr. James G. Wendelberger CV/Resume

Date: 6 July 2020
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Overview:

I am interested in all things scientific and quantitative. My early years included formal education in mathematics, physics and statistics. I have over 35 years of professional experience in statistical consulting, and all that it entails, including management skills, knowledge and experience about virtually all quantitative methodologies, writing reports and papers, preparing and delivering presentations, and involvement in professional activities. I have continued my collegiate and graduate education in chemistry, biology and most recently for a second PhD in nanoscience and microsystems engineering. I have both a broad formal education in science and quantitative methods as well as highly focused knowledge and experience in multiple scientific and quantitative specialties. From big data to sparse data and highly structured science to the exploratory scientific method I provide solutions in application areas and in a research and development environment.

Employment (1982 – Present):

Scientist/Statistician (2016 - Present) Computer, Computational, and Statistical Sciences Division, Statistical Sciences Group, CCS-6, Los Alamos National Laboratory (LANL)

Scientist/Statistician (2013 - 2016) Nuclear Material Control and Accountability, SAFE-NMCA, Los Alamos National Laboratory

Director of Statistical Analysis (1992 – 2015), General Manager (1989 – 1992) and Retail Division Quantitative Analysis (1987 – 1989), Urban Science Applications, Incorporated. Oversee and partake in the research and development needed for valid application of mathematical and statistical models to generic solutions to business problems throughout Urban Science. Participate in the subsequent interface of these models with the customer

1983 – 1987 Senior Research Scientist, General Motors Research Laboratories. Formulate and solve statistical and mathematical models for corporate problems

1984 Adjunct Professor for Introductory Statistics, Department of Mathematical Sciences, Oakland University

1982 – 1983 Postdoctoral Research Associate, Department of Space Science and Engineering, University of Wisconsin

Education:

- 2nd PhD: in progress **NanoScience and MicroSystems Engineering**
- 1st PhD: Statistics, Minor Mathematics
- MS: Statistics
- BS: Physics and Mathematics

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2011 – Present Ph.D. in progress in **NanoScience and MicroSystems Engineering**, University of New Mexico; required course work, qualifying and comprehensive exam completed, research, thesis and final defense to complete. Courses (Cum. GPA = 4.1+):

- Mathematics Reading and Research Summer 2013-2016 – Terry Loring A's
- Introduction to C* Algebras Spring 2013 – Terry Loring A
- Mathematics Reading and Research Spring 2013 – Terry Loring A
- Quantum Field Theory I Fall 2012 – Kevin Cahill A+
- Quantum Information Theory Fall 2012 – Carlton Caves B+
- Cell & Molecular Basis of Disease Seminar Spring 2012 – Michael Wilson A
- Synthesis of Nanostructures Spring 2012 – Steven Brueck and C. Jeff Brinker A+
- Theory Fabrication & Characterization of NEMS-MEMS Spring 2012 - Zayd Leseman A
- Density Functional Theory Fall 2011 – Susan Atlas A
- Social & Ethical Issues Nanotechnology Fall 2011 – William Gannon A
- Characterization Methods Nanostructures Fall 2011 - Abhaya Datye and John Grey A
- Chemistry & Physics of Nanoscale Spring 2011 – Debra Evans & Kevin Malloy A+

Invention: “MINIMAL LANCING BLOOD GLUCOSE DETECTOR,” University of New Mexico Invention Disclosure Docket Number 2012-116, Joint with Patricia Langan, 2012.

1994 - 2000 Continuous Post Graduate Courses, University of New Mexico – Los Alamos (Cumulative GPA = 3.83)

- Bioscience 2000
- Immunobiology 2000
- Genetics (1999)
- Biology (1996-1997)
- Human Anatomy & Physiology (1995)
- Organic Chemistry (1994-1995)

1978 - 1982 Ph.D. in **Statistics**, University of Wisconsin; Thesis Topic: Smoothing Noisy Data with Multidimensional Splines and Generalized Cross-Validation; Minor: **Mathematics**

1976 - 1978 M.S. in **Statistics**, University of Wisconsin

1971 - 1976 B.S. with distinction and a double major in **Mathematics** and **Physics**, University of Wisconsin

International Invited Presentation and Paper:

LEVIA 2018 Invited paper and presentation at the Leipzig Symposium on Visualization in Applications, with Paul Herrick Smith, “Data Visualization for Statistical Analysis and Discovery in Container Surface Characterization at the **Nano-Scale and Micro-Scale**,” Leipzig, Germany, 19, October, 2018

Professional Experience:

2020-2022	Chair Elect, Chair and, Past Chair, Section on Statistics in Defense and National Security of the American Statistical Association
2016-2018	Chair Elect, Chair and, Past Chair, Section on Physical and Engineering Sciences of the American Statistical Association
IAEA 2015	Invited to and participated in the United Nations International Atomic Energy Agency (IAEA) Technical Meeting on Statistics in Vienna Austria, 14 - 16 October 2015
2015	Chair, Section on Statistics in Marketing of the American Statistical Association
2014	Chair Elect, Section on Statistics in Marketing of the American Statistical Association
2013 – 2013	Guest Scientist at Los Alamos National Laboratory
2012 - 2014	Program Chair and Program Chair Elect, Section on Physical and Engineering Sciences of the American Statistical Association
1998 - 1999	President, Albuquerque Chapter of the American Statistical Association
1988 - 1989	President, Detroit Chapter of the American Statistical Association

Professional Memberships:

- American Association for the Advancement of Science
- American Statistical Association
- The Mathematical Association of America
- Society of the Sigma-Xi

Professional Accreditation:

Dr. James G. Wendelberger, PStat®
American Statistical Association, License Accredited Professional Statistician™
December 2012 – December 2017

Other Professional Activities:

Science Fair Judge
Head – Los Alamos Girls Basketball League – Executive, Web, Publicity
Head – LinkedIn Group – American Statistical Association Professionals – Over 3,750 members

Honors:

Student Registration Scholarship for ES2016
Los Alamos National Laboratory LAAP Award, 2016
The Honor Society of Phi Kappa Phi

LANL LA-UR Publications (thru 2018):

LA-UR-18-29567	Data Visualization for Statistical Analysis and Discovery in Container Surface Characterization at the Nano-Scale and Micro-Scale - Joint
LA-UR-18-29282	The Identification and Quantification of Pits, Cracks, and Corrosion from Container Material Image Surface Depth Measurements with Subsequent Container Classification

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LA-UR-18-29080 Data Visualization for Statistical Analysis and Discovery in Container Surface Characterization at the Nano-Scale and Micro-Scale - Joint

LA-UR-18-28722 Reading a vk4 File, Utilizing Polytopes for Multivariate RGB Images, and Creating Image Features in Microns

LA-UR-18-28049 Data Visualization for Statistical Analysis and Discovery in Container Surface Characterization at the Nano-Scale and Micro-Scale

LA-UR-18-27762 Image Analysis of Stringer Area: Three Images

LA-UR-18-27754 Rapid Response Quantum Programming: Statistical Difference

LA-UR-18-27271 Training Aids for Statistical Concepts in Safeguards Workshop - Joint

LA-UR-18-26644 An Advanced Analytical Technique for the Determination of Burnable Poison Content in Fresh LWR Fuel Assemblies - Joint

LA-UR-18-26193 The identification and quantification of pits, cracks, and corrosion from container material image surface depth measurements with subsequent container classification

LA-UR-18-24900 An Advanced Analytical Technique for the Determination of Burnable Poison Content in Fresh LWR Fuel Assemblies - Joint

LA-UR-18-24530 Comparison of single- and multi-gate methods for neutron multiplicity uncertainty analysis - Joint

LA-UR-18-22975 Quantum Algorithm Implementations for Beginners - Joint

LA-UR-18-21906 3013 Surveillance and Monitoring Annual Program Review - Joint

LA-UR-18-21809 CoDA 2018 Poster Abstracts - Joint

LA-UR-18-21728 Goals / Timeline for Automated Image Analysis: MIS Call Tuesday 27 February 2018 - Joint

LA-UR-18-21713 The Identification and Quantification of Pits, Cracks, and Corrosion from Container Material Image Surface Depth Measurements with Subsequent Container Classification Poster CODA 2018

LA-UR-18-21495 Automated Image Analysis for Screening LCM Images – Examples from 09DE2

LA-UR-18-20810 Extracting the Data From the LCM vk4 Formatted Output

LA-UR-18-20809 Automated Image Analysis Corrosion Working Group Update: February 1, 2018

LA-UR-18-20775 The identification and quantification of pits, cracks, and corrosion from container material image surface depth measurements with subsequent container classification

LA-UR-18-20671 “An Advanced Analytical Technique for the Determination of Burnable Poison Content in Fresh LWR Fuel Assemblies” - Joint

LA-CP-18-20410 Uncertainty Calculations for the Linear Calibration Equation

LA-CP-18-20317 Statistical Analysis of PBX 9501 Mechanical Properties from Core Surveillance

LA-CP-18-20263 Propagation of Variance (POV) Uncertainty Calculations for the Neutron Emission Rate (NER) Measurement Process Report

LA-CP-18-20032 WR Production Sampling Strategies Fixed Lot and Continuous Sampling of Production Blended Powder Presentation, LLNL and LANL meeting to discuss fixed lot and continuous production

LA-UR-17-30991 Automatic Image Analysis Status Report - Joint

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LA-UR-17-29429	Container Surface Feature Detection 2018 Goals
LA-UR-17-28052	Container Surface Evaluation: Background Estimation, Background Removal, Feature Detection, and Image Ranking - Joint
LA-UR-17-26844	Container Surface Evaluation by Function Estimation
LA-UR-17-26162	Neutron Multiplicity: LANL W Covariance Matrix for Curve Fitting
LA-UR-17-25008	Uncertainties in the Neutron Coincidence Counting Analyses: Accounting for Correlation and Uncertainties
LA-UR-17-23400	Accountability Tanks Calibration Data Analysis - Joint
LA-UR-17-23247	Using the Time Correlated Induced Fission Method to Simultaneously Measure the ²³⁵ U Content and the Burnable Poison Content in LWR Fuel Assemblies – Joint
LA-UR-17-22499	Statistics Concepts in Safeguards
LA-CP-17-20138	Neutron Uncertainties for ER and Warhead Verification – Joint
LA-CP-17-20137	Neutron Uncertainties for ER and Warhead Verification summary - Joint
LA-UR-16-29306	Initial Results for Neutron Multiplicity Uncertainties: The Correlation
LA-UR-16-29269	Neutron Multiplicity: LANL W Covariance Matrix for Curve Fitting
LA-UR-16-28572	Numerical Computations of the Pseudospectrum for the Chern Hamiltonian on a Thin Film 2-D Hall Bar Geometry - Joint
LA-UR-16-26673	Impact of Uncertainties of Nondestructive Assays (NDA) Measurements and Methodologies on Physical Inventories Differences - Joint
LA-UR-16-26299	Overview ID/POV Process
LA-UR-16-26298	Non-Destructive Assay (NDA) Uncertainties Impact on Physical Inventory Difference (ID) and Material Balance Determination: Sources of Error, Precision/Accuracy, and ID/Propagation of Error (POV)
LA-UR-16-22284	Numerical Studies of Nano-Film, Wire and Dot Transitions with Emergent Nano Properties - Presentation
LA-UR-16-22207	Numerical Studies of Nano-Film, Wire and Dot Transitions with Emergent Nano Properties - Proposal
LA-UR-15-27538	Statistical Concepts in Safeguards – Joint.
LA-UR-15-25240	Exact Sample Size for Special Nuclear Material Inventory Verification
LA-UR-15-23594	SAFE-4 STATISTICAL INVENTORY VERIFICATION MEASUREMENTS SAMPLING PLAN
LA-UR-15-20692	Exact Sample Size for Special Nuclear Material Inventory Verification
LA-UR-14-29351	Inventory Difference Accounting – Joint.
LA-UR-14-22430	From Spline Smoothing to Quantum Information and Beyond
LA-UR-14-21908	Experiments, Measurement Error, Causality and Probability: Los Alamos Judicial Science School
LA-UR-14-21887	Mass Balance through ASP

External Published Articles:

1. James G. Wendelberger (2020) In progress. 2020 Proceedings of the Joint Statistical Meetings

2. James G. Wendelberger (2019) 2019 Proceedings of the Joint Statistical Meetings
3. James G. Wendelberger and Paul Herrick Smith (2018) “Data Visualization for Statistical Analysis and Discovery in Container Surface Characterization at the Nano-Scale and Micro-Scale,” Leipzig Symposium on Visualization in Applications, Leipzig, Germany, <http://levia.vizcovery.de/paper/levia18-wendelberger.pdf>
4. James G. Wendelberger (2018) “The Identification and Quantification of Pits, Cracks, and Corrosion from Container Material Image Surface Depth Measurements with Subsequent Container Classification,” 2018 Proceedings of the Joint Statistical Meetings
5. James G. Wendelberger (2017) “Neutron Multiplicity: LANL W Covariance Matrix for Curve Fitting,” Proceedings of the 2017 Joint Statistical Meetings
6. M. A. Root^a, H. O. Menlove^a, R. C. Lanza^{ab}, C. D. Rael^a, K. A. Miller^a, J. B. Marlow^a, and J. G. Wendelberger^a: *Using the Time Correlated Induced Fission Method to Simultaneously Measure the ²³⁵U Content and the Burnable Poison Content in LWR Fuel Assemblies*, submitted to Nuclear Technology, May 2017.
7. James G. Wendelberger and Terry A. Loring (2016): *Numerical Computations of the Pseudospectrum for the Chern Hamiltonian on a the Thin Film 2-D Hall Bar Geometry*, Poster Presentation at ES2016: The 28th Annual Workshop on Recent Developments in electronic Structure Methods, June 26-29, 2016, University of New Mexico, Albuquerque, NM – paper in progress.
8. James G. Wendelberger (2015): Exact Sample Size for Special Nuclear Material Inventory Verification. In *JSM Proceedings*, Quality and Productivity Section. Alexandria, VA: American Statistical Association.
9. James G. Wendelberger (2014): Dataset Quality Assessment for Business Analytics Use. In *JSM Proceedings*, Quality and Productivity Section. Alexandria, VA: American Statistical Association. 2352-2361.
10. James G. Wendelberger (2014): From Spline Smoothing to Quantum Information and Beyond. In Conference on Nonparametric Statistics for Big Data-Grace Wahba, 2014-06-04/2014-06-06 (Madison, Wisconsin, United States) Proceedings, LA-UR-14-22430, Los Alamos National Laboratory, Los Alamos, NM.
11. James G. Wendelberger (2013): Agent-Based Model and Statistical Engineering of Automobile Purchase Behavior and Retail Actions. In *JSM Proceedings*, Section on Statistics in Marketing. Alexandria, VA: American Statistical Association. 348-362.
12. James G. Wendelberger (2012): “Effectiveness of Automobile Salesperson Training,” Proceedings of the Joint Meetings of the American Statistical Association, July, San Diego, CA.
13. James G. Wendelberger (2011): “Statistical Engineering as Practiced at Urban Science,” Proceedings of the Joint Meetings of the American Statistical Association, July, Miami Beach, FL.
14. James G. Wendelberger (2009): “Daily Gasoline Prices, Stock Market Indices, Consumer Internet Hits, Automobile Incentives and Automobile Sales, For the Forecasting Of Future Month Automobile Model Demand,” Proceedings of the Joint Meetings of the American Statistical Association, August, Washington D.C.
15. James G. Wendelberger (1998): “The Estimation of Rainfall Distribution for Emergency Response to Chernobyl Type Incidents Utilizing Multidimensional Smoothing Splines,” *Journal of Geographic Information and Decision Analysis*, Vol. 2, No. 2.

16. J. Wendelberger (1987a): "Surface Representation from Measurements: Paint Attribute Data," Department of Mathematics, General Motors Research Laboratories Report.
17. J. Wendelberger (1987b): "Multiple Minima of the Generalized Cross-Validation Function: Paint Attribute Data," Department of Mathematics, General Motors Research Laboratories Report.
18. John K. Antonio, James G. Wendelberger, Greg P. Matthews, William G. Trabold, and Mark H. Costin (1986): "Optiscan: The Use of Reflectometry for Detecting Quality Attributes of Basecoat Paint," General Motors Research Laboratories, Warren, MI, Research Report No. ET-426/MA-357, Dec., 31 pages.
19. James G. Wendelberger and Michael A. Wincek (1986): "The Selection of a Statistical Data Analysis Computing Environment for an Industrial Research Laboratory," Computer Science and Statistics: Proceedings of the 18th Symposium on the Interface, American Statistical Association, Washington, D.C.
20. James G. Wendelberger et al (1982): "Improving Statistical Consulting Services," Proceedings of the Wisconsin Workshop on Consulting Intern Programs in Statistics, University of Wisconsin, Nov. 11-13, pp. 131-137.
21. James G. Wendelberger (1982): "Smoothing Noisy Data with Multidimensional Splines and Generalized Cross Validation," Ph.D. Thesis, Department of Statistics, University of Wisconsin, 336pp.
22. James G. Wendelberger (1982): "Estimation of Divergence and Vorticity using Multidimensional Smoothing Splines," Proceedings of the NASA Workshop on Density Estimation and Function Smoothing, Department of Mathematics, Texas A&M University, pp. 386-406.
23. James G. Wendelberger (1981): "The Computation of Laplacian Smoothing Splines with Examples," Tech. Report No. 648, Department of Statistics, University of Wisconsin.
24. Grace Wahba and Wendelberger, James G. (1980): "Some New Mathematical Methods for Variational Objective Analysis Using Splines and Generalized Cross Validation," Monthly Weather Review, Volume 108, 8, 1122-1143.

Selected Presentations:

2020 Joint Statistical Meetings

2019 Joint Statistical Meetings

"Data Visualization for Statistical Analysis and Discovery in Container Surface Characterization at the Nano-Scale and Micro-Scale," Leipzig Symposium on Visualization in Applications, Leipzig, Germany.

"The Identification and Quantification of Pits, Cracks, and Corrosion from Container Material Image Surface Depth Measurements with Subsequent Container Classification," Joint Statistical Meetings, 2018

"Neutron Multiplicity: LANL W Covariance Matrix for Curve Fitting," Joint Statistical Meetings, 2017

"Exact Sample Size for Special Nuclear Material Inventory Verification," 10 August 2015, Joint Statistical Meetings, Boston, MA.

"Dataset Quality Assessment for Business Analytics Use," 3 August 2014, Joint Statistical Meetings, Boston, MA.

“From Spline Smoothing to Quantum Information and Beyond,” 6 June 2014, Conference on Nonparametric Statistics for Big Data and Celebration to Honor Professor Grace Wahba, University of Wisconsin – Madison, Madison, WI.

“Agent Based Model and Statistical Engineering of Automobile Purchase Behavior and Retail Actions,” 5 August 2013, Joint Statistical Meetings, Montreal, Canada.

“Effectiveness of Automobile Salesperson Training,” 2 August 2012, Joint Statistical Meetings, San Diego, CA.

“Estimation of Curvature: Large Data for Small Problems,” 6 June 2012, American Statistical Association Quality and Productivity Conference, CSU - Long Beach, CA.

“Statistical Engineering as Practiced at Urban Science,” 31 July 2011, Joint Statistical Meetings, Miami Beach, FL.

“Statistical Engineering as Practiced at Urban Science,” 29 April 2011, ASA Albuquerque Chapter Meeting, Hilton, Santa Fe, NM.

“Estimation of New Automobile Demand in Countries Around the Globe,” 23 May 2011, 61st Annual IIE Conference & Expo, Applied Solutions Sessions– Reno, Nevada.

“Determining Automotive Demand: Demographic or Registration Data?,” 02 August 2010, Joint Statistical Meetings, Vancouver, BC.

“Daily Gasoline Prices, Stock Market Indices, Consumer Internet Hits, Automobile Incentives And Automobile Sales, For The Forecasting Of Future Month Automobile Model Demand,” 3 August 2009, Joint Statistical Meetings, Washington, D.C.

“Finding Control Markets for Automotive Incentive Marketing Campaigns,” 6 August 2001, Joint Statistical Meetings, Atlanta, GA.

Patent Granted:

“SYSTEM AND METHOD FOR DETERMINING A GROUPING OF SEGMENTS WITHIN A MARKET”, Serial No. 12/027,582, Filed February 7, 2008.

Select Conference Activities:

2020 Joint Statistical Meetings

2019 Joint Statistical Meetings

2018 Joint Statistical Meetings

2017 Joint Statistical Meetings

July 30 - August 4, 2016, 2016 Joint Statistical Meetings, Chicago, Illinois.

August 8 - August 13, 2015, 2015 Joint Statistical Meetings, Seattle, Washington.

August 2 - August 7, 2014, 2014 Joint Statistical Meetings, Boston, Massachusetts.

August 3 - August 8, 2013, 2013 Joint Statistical Meetings, Montreal, Quebec, Canada.

February 21 - 23, 2013, Southwest Quantum Information and Technology, Fifteenth Annual Meeting, Santa Barbara, California.

July 29 - August 2, 2012, 2012 Joint Statistical Meetings, San Diego, California.

November 19 – 21, 2012, Workshop on Entanglement and Entropy, “Entangle this: Strings, Fields and Atoms”, Madrid, Spain.

June 4 - 7, 2012, The 29th Quality and Productivity Research Conference, California State University Long Beach, Long Beach, CA.

July 30 - August 4, 2011, 2011 Joint Statistical Meetings, Miami Beach, Florida.

June, 1980, SIAM Summer Research Conference on Numerical and Statistical Analysis, University of Delaware.

Professional Solution:

Solver, Mathematics Magazine, Vol. 81, No. 3, June 2008, Problems Page 220, Number 1796.

Selected Legal Cases:

1. November 2008 – January 2009: State Of Wisconsin Division Of Hearings And Appeals, Vande Hey Brantmeier Chevrolet, Buick, Pontiac, Inc., Complainant, V. General Motors Corporation, Respondent, Case No. Tr-08-0046. Provided Analysis, Deposition, And Testimony.
2. February – April 2008: State Of Wisconsin Division Of Hearings And Appeals, Scaffidi Motors, Inc., Complainant, V. General Motors Corporation, Respondent, Case No. Tr-07-0042. Provided Analysis, Deposition, And Settled Before Testimony.
3. February and March 2006: Kansas Department of Revenue Division of Vehicles, McCarthy Chevrolet, Inc. D/B/A McCarthy Olathe Hyundai Petitioner vs. Hyundai Motor America, Shawnee Mission Kia, Shawnee Mission Hyundai, Inc. and James P. Morrissy Respondents. Provided Rebuttal Analysis, Nonlinear Model and Small Sample Size, for Thomas A. Longo.
4. February 2006: Tipton Honda, San Diego, Trend Cycle Projections, for Bob Catanzarite.
5. November 2005: Hyundai, Expert Exhibit Term Definitions for Sharif Farhat.
6. September 2005: Honda Lemon Grove Regression Analysis Critique for Bob Catanzarite.
7. March 2005: Homosassa Nissan, Prizm Regression Analysis for Tara O'Brien.
8. February 2005: In The District Court For The District Of New Jersey, Mercedes-Benz Antitrust Litigation Master File No. 99-4311 (WHW), Statistical Comments on Trial Report of John C. Beyer, for Josh Pope.
9. January 2005: Infiniti Boston Drive Time Logit Analysis for J. Robinson.
10. January 2005: Buick, Share of Franchise Analysis for Josh Pope.
11. October 2004 – February 2005: Aspen Ford, Inc., Et Al, vs Ford Motor Company, Repair Orders, Market Definition and General Statistical Comments for Josh Pope.
12. August – December 2004: Dallas Nissan, Pseudo R-Squared, Power Curve Fit, Regression and Logit Analysis and Statistical Analysis for James Anderson.
13. June 2004: Foster Ford Add Point Scenarios Travel Time and Travel Distance Logit Analysis.
14. February 2004: Saturn Irvine, CA Add Point State Share of Franchise Regression for Bret Chennault - ChannelVantage and Sharif Farhat.
15. January 2004: BMW Fort Meyers, Logit Analysis Rebuttal for Michael Palmer and Lori Segan.

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16. November 2003: San Jose, Fremont, Oakland CA Toyota Share of Reciprocal Drive Time and Logit Analysis for Bob Catanzarite and John Frith.
17. October 2003: Steve Taub Audi and Customer Satisfaction Index Analysis With Sign Test for James Anderson.
18. September 2003: The United States District Court for the Oregon Case No. 02-CV-1504-K1 for Portland logit model and drive time rebuttal for John Frith.
19. June 2003: Toyota in Orlando. Drive time and Logit rebuttal analysis for Sharif Farhat.
20. May 2003: Honda in California. Logit rebuttal analysis for Bob Catanzarite and James Anderson.
21. February 2001: Circuit Court of ST. Louis County, Cause No.: 99CC-003789, Division 11, State of Missouri, Ackerman Buick, Inc. Plaintiff v. General Motors Corporation Defendant. Statistical Critique and Analysis for Jeffrey J. Jones and J. Todd Kennard of Jones Day, Columbus, Ohio.
22. January – February, 2001: Lance Pontiac Statistical Critique and Analysis for Mr. Sharif G. Farhat, Urban Science Applications, Inc., 200 Renaissance Center, Detroit, MI.
23. June – August, 2000: Before the Texas Department of Transportation Division of Motor Vehicles Motor Vehicle Board, Docket No. 99-0018LIC, Hon. Kathryn A. Scales, Park Place Jaguar, Ltd., d/b/a Park Place Jaguar of Houston, Ltd., Applicant and Momentum Motor Cars, Ltd., d/b/a Momentum Jaguar, Protestant, and Jaguar Cars, A Division of Ford Motor Company, Intervenor. Statistical Critique and Analysis of trial material with Mr. Gregory Shaffer and Mr. Rohit Nepal of Kirkpatrick and Lockhart, 1251 Avenue of the Americas, 45th Floor, New York, NY 10020-1104.
24. December, 1998 – April, 1999: Before the Commissioner, Department of Motor Vehicles, Commonwealth of Virginia, Miller Auto Sales, Inc., a corporation organized and existing under the laws of the Commonwealth of Virginia, Petitioners vs. Volkswagen of America, Inc., a corporation organized and existing under the laws of the State of New Jersey, Respondent, hearing officer Morris A. Nunes. Testimony and Statistical Critique and Analysis for Mr. James Vogler and Mr. Randy Oyler, Foley and Lardner, One IBM Plaza, 330 North Wabash Avenue, Suite 3300, Chicago, IL.
25. December 1998: Buick Motor Division, General Motors Corporation, and Endicott Buick, Inc. v. Phil Smith Buick, Inc. and Ralph Buick, Inc.. Statistical Critique and Analysis for Mr. James A. Anderson, Urban Science Applications, Inc., 200 Renaissance Center, Detroit, MI.
26. November 1998: Ball Honda vs. American Honda and Fuller Honda vs. American Honda, Statistical Critique and Analysis for Mr. James A. Anderson, Urban Science Applications, Inc., 200 Renaissance Center, Detroit, MI.
27. March – June 1997: In the United States District Court for the District of Maryland, Case No. MDL-1069, American Honda Motor Co., Dealership Relations Litigation. Statistical Critique and Analysis for Mr. Richard Inglis, Gargiulo, Rudnick & Gargiulo, Boston MA, Mr. Jon S. Tigar, Kecker & Van Nest, San Francisco, CA and Mr. John Nathanson, Roger & Wells, New York, NY.

28. August 1992: State of Florida, Division of Administrative Hearings, Tallahassee, FL, DOAH Case No. 91-6052 – J.O. Stone Buick GMC Truck, Inc., Palm Harbor, Florida and General Motors Corporation/GMC Truck Division v. Charlie Harris Pontiac, Inc., Clearwater, Florida and Dept. of Highway Safety and Motor Vehicles. Statistical critique and analysis with Mr. Edward W. Risko, General Motors Corporation, and Mr. Dean Bunch, Sutherland Asbill & Brennan LLP, Tallahassee, Florida.
29. April – July, 1990: Before the Texas Motor Vehicle Commission, Docket #87-149, Sewell Oldsmobile, Applicant, Freeman Oldsmobile, Protestant, Oldsmobile Division, General Motors Corporation, Intervenor. Statistical Critique and Analysis and oral deposition with Mr. William Whalen, General Motors Corporation, Detroit, MI.

Experience:

Statistics in Safeguards: Lead instructor and developed course presented in Rio de Janeiro, Brazil, December 2019, and, Buenos Aires, Argentina, August, 2018. Developed and taught course for nationwide students at LANL, 2015 and April, 2017.

Nuclear Material Safeguards: Calculation of exact sample sizes, design of inventory difference calculation methodology, measurement control experience, estimation of material mass uncertainties, propagation of variance and shipper receiver limit of error methodologies. Pu238 uncertainty calculations and multiplicity uncertainty calculations.

Data Mining: Statistical Expert on the Data Mining System, Knowledge and Data Discovery Award Winning Software SAS, JMP, Excel.

Big Data: 100's of factors by multiple 1,000,000 cases. Dozens of projects.

GIS System: Head Inventor and Developer of The Market Resource (TMR) – Personal Computer Based Geographic Information System, created custom windowing system, MS - DOS

Spatial Analysis: Spatial Modeling – Gravity Model, Attractiveness Profiles and Agent Based Model Using StarLogo software.

Time Series Analysis: Time Series Modeling - Trend Cycle Model, Annual, Monthly, Weekly and Daily Time Series Model which Conforms to Various Constraints. EXCEL and Mathematica.

Segmentation Analysis: Segmentation – Patent.

Outlier detection: Beta Eye – Data Aberration Detection System.

Small Area Estimation: Data Distribution, Disaggregation and apportionment subject to integer value and positivity utilizing multinomial cumulative distribution with uniform deviates.

Management Experience: Retail Division: General Manager responsible for 8 individuals and the running of the division. Director of Statistical Analysis – Matrix Organization. Retail Division: Quantitative Analysis Manager.

Legal: Legal cases – testifying and non-testifying statistics expert. Depositions, reports, advice and testimony.

Meteorological Modeling: Pressure, Temperature, Divergence, Vorticity Field Estimation. NASA Goddard student intern programming FORTRAN Spline and meteorology. Splines on the Sphere – Di-logarithms, FORTRAN and UNIX.

Sample Size: Sample Size MS-DOS program.

Causality: Causality Research. Recent works and application to statistical modeling.

Teaching Experience: Judicial Science School (LANL), Creation and Teaching of Statistics I and Statistics II courses (USAI). Oakland University Adjunct Professor, Teaching Assistant for courses: Introductory Statistics (Chung), Introduction to Mathematical Statistics for Engineers (Grace Wahba), Time Series Analysis I and II (George Box) and Grader for Courses: Biostatistics (Anistatio Tsiatis) (UW-Madison).

Project Assistant: Time Series Reference Papers (George Tiao).

Leadership: Endorsed by the Los Alamos National Laboratory Leadership On-Ramp program. Referee – Soccer and Basketball Midschool and high School Boys first round playoff game. Head of the Los Alamos Girls Basketball League. Basketball Coach for 8 different teams. Computer Environment Build for Mathematics Department of the General Motors Research Laboratory as well as Statistical Analysis Methodology, Inc. UNIX. McDonalds – Crew member, Crew chief and Maintenance Man.

Analysis Projects:

Color X-ray Film – Calibration Equipment and Dose Detection Testing.

Compton Experiment – Cesium 137 – Idea, Blueprint, Assembly and Final Experiment.

Shielding of various radioactivity by various shielding elements.

Thermal luminescence crystal experiments.

Minimal Lancing Blood Glucose Real Time Continuous Monitor – Invention.

Ground Water Modeling – scaling time with 3 dimensional special data to fit spline with 5 dimensional data.

General Motors GapSight.

Cylinder Out-of-Roundness.

Automobile Paint Coat Characterization.

Radioactive Rainfall – Chernobyl Data and Model Fitting.

Second Choice Bias.

Satellite Night Time Light Data.

Serial Killer Data Analysis: Model with vector analysis. Last known location, killing site and/or dump site correlated to the perpetrator location.

Clean Room Fabrication Experience: Carbon Nano-wire Nozzle Prototype – Mask, Nickel deposition and wafer fabrication, NEMS and MEMS course activities.

Research:

Topological Insulator Numerical Experiments

Inventory Difference and Propagation of Uncertainty calculations – Python code.

Generalized Cross Validation as a function of data noise or function periodicity.

Wafer Distortion.

Copper Oxide catalyst for epoxidation of propylene – Density Functional Theory.
Topological Insulator Research – Super computer Gibbs, Timings and MATLAB.
Multi Dimensional Spline Smoothing Code – FORTRAN under UNIX.

Web Presence:

Website Creation, Maintenance and 1&1 Website builder. Mathematics and Science Blog.

Remote Communication: Video Conference Build: Polycom.

Manual Labor: American Motors Assembly line work. McDonalds Crew Member and Maintenance Man.

Various Written Reports (Partial):

1. Sample Size Program
2. Help File sample size program
3. Manufacturer Operations per Dealer Outline
4. The Use of Location in Telemarketing Campaigns to Measure and Optimize Response Probability
5. A Trend-Cycle Forecasting Model
6. Point Prediction for a Logit Regression Model
7. Segmentation Issues
8. A Non-Linear, Probability Based Approach to Prospect List Selection
9. Outlet Characteristic Analysis - Micro-Location Parameter Estimation and Significance
10. Profitability Through Lifetime Value Modeling and Analysis - The Insurance Company
11. Lifetime Value Modeling and Analysis - The Bank
12. Location and Geospatial Data in Statistical Models for Better Business Decisions
13. Integration of Models for Predictive Modeling
14. A Worldwide Automotive Registration Database with Analysis on Demand
15. National Center for Database Marketing - Chicago 1995 Conference Report
16. Interpretation of Regression Estimates, Program Plus Sales - Statistical Significance and Estimation
17. The Statistical Modeling Process
18. Market Ranking From Demographic Factors
19. Examples of Linear Regression Statistical Significance
20. Examples of Linear Regression Outliers
21. Examples of Linear Regression R-Squared
22. Customer Satisfaction Index Sign Test Example
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