

N. Shirlene Pearson, Ph.D.

Pearson Statistical Consulting & Expert Testimony

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Education

Ph.D.	Statistics	Southern Methodist University	Dallas, TX	1979
M.S.	Statistics	Southern Methodist University	Dallas, TX	1975
M.A.	Mathematics	The University of Texas at Austin	Austin, TX	1973
B.A.	Mathematics	The University of Texas at Austin	Austin, TX	1971

PhD Dissertation: Time Series Analysis, MA Thesis: Algebra,
BA Minor: Biology, BA Minor: Chemistry

Teaching Experience

Statistics 5304 – Introduction to Statistical Computing (in SAS)
Statistics 6366 – Statistical Consulting
Statistics 2301 – Statistics for Modern Business Decisions
Statistics 2331 – Introduction to Statistical Methods
SPSS Workshops

Professional Affiliations and Activities

Member at Large, Section on Statistical Consulting, 2006-2008 Annual Joint Statistical Meetings
Program Chair, Section on Statistical Consulting, 2004 Annual Joint Statistical Meetings
Session Chair, Section on Statistical Consulting, 2004 Annual Joint Statistical Meetings
Session Chair, Section on Statistical Consulting, 2003 Annual Joint Statistical Meetings
President, North Texas Chapter, American Statistical Association (2000-2001)
Vice President and Program Chair, North Texas Chapter, American Statistical Association (1999-2000)
American Statistical Association
Managing Editor, *Selected Tables in Mathematical Statistics* (1983-1990)
Editorial Board, *Selected Tables in Mathematical Statistics* (1974-1990)

Honorary - *Sigma Xi, the Scientific Research Society of North America; American Statistical Association Long-Time Member*

Statistical Consulting Experience (selected examples)

Expert Testimony, Litigation and Legal Support – review and analysis of tribal claims against the United States of America; analysis of grading system in use for determining first-year students retention at a major law school in Texas, evaluation of survey-based reports issued by the Texas State Bar Association, insurance fraud, employment discrimination, inventory disputes between companies, contract disputes between companies, medical malpractice, criminal probability modeling, sampling and extrapolation for cases involving audits, election fraud; Education- analyze library training data of students at twelve major universities and merge into a single report of its effect on student retention and academic success; statistical support for SMU's university curriculum course-level assessments; assisted with exit survey of graduates to assess student satisfaction with curriculum and experiences while attending SMU's Meadows School of Fine Arts; responsible for SMU's online course evaluation reports and analyses of response data; study comparing language acquisition of native English speakers learning Spanish and native Spanish speakers learning English, statistical support for the President's Commission on the Status of Women at SMU, classroom learning outcomes modeling and assessment. Campus survey manager – assist members of the SMU community with designing, developing, conducting and analyzing surveys (using both Survey Monkey and Qualtrics); Advertising – analyzed factors influencing consumer environmental concerns and green buying patterns; Anthropology - study of migratory patterns of ancient civilization in the Upper Karoo, South Africa; Art History – analyzed acoustics data of the effect of tapestry on the walls of the Sistine Chapel; Corporate Communications & Public Affairs – provided statistical analysis support for a study of voters which assessed their attitudes toward candidates before and after presidential debates; Biostatistics and Clinical Trials – degenerative loss of visual function, chemotherapy study, eligibility analysis for hospice intervention, catheter intervention study, analysis of psychiatric instruments, micro-array research, olfactory capacity modeling, physical therapy data analysis and modeling, brainwave responses of patients with communication disorders, cardiac rehabilitation study, effectiveness of cosmetic surgical procedures, cardiovascular risk study of a common type of antibiotic used in hospitals; Accident and Injury – review of physician treatment and recommendations for an employee injured at a major wholesale retailer and the employers unfair dismissal of employee; Business Statistics – predictive analytics, financial analysis modeling, credit risk modeling, sampling plans for auditing of large databases or inventories, forecasting methodology for real-estate analysis, sampling plans for customer satisfaction surveys, healthcare insurance subscriber trends; Communications - study comparing preference for surround sound versus traditional cinema sound technology.

Statistical Computing

Strong background in implementing software applications including tool development in both UNIX and Windows environments: SPSS, Statistica, Visual Basic, Excel macros, SAS, Qualtrics survey software, R, graphical programming, the UNIX operating system, ksh/csh/sh, awk/gawk, Javascript and html/xhtml, Access, FORTRAN, RATFOR, S interface language, Splus, Filemaker Pro.

EXPERIENCE SUMMARY

Southern Methodist University *Dallas, TX 1999 - present*

Adjunct Professor, Department of Statistical Science
Statistical Consulting, Office of Assessment & Accreditation
Statistical Consulting and Research Support, Center for Teaching Excellence
Statistical Consulting and Research Support, Academic Technology Services
Director, Center for Statistical Consulting and Research, Department of Statistical Science
Addl: SMU President's Commission on the Status of Women, 2011-2014

MCI WorldCom Telecommunications *Dallas, TX 1997 - 1999*

Sr. Engineer II, Network Design Standards, Network Reliability and Performance

The Applied Research Laboratories, The University of Texas at Austin *Austin, TX 1991 - 1997*

Research Scientist Associate V, Telecommunications Systems & Network Modeling and Simulation, Radio Frequency Propagation Analysis and Optimization Methods, Radio Frequency Mission Planner
System Test Branch Manager, Fire Support Artillery Test System

Bell Communications Research *Red Bank, NJ 1984 - 1989*

District Manager, Operator Systems Analysis
District Manager, Analysis Systems District
Member of Technical Staff, Software Systems and Software Quality Analytical Methods District
Member of Technical Staff, Switching Processor and Field Performance District
Additional:

Bellcore Software Metrics Steering Committee Member
Center Technical Organization Contact for Ph.D./M.S. campus hires
Center representative to the Area Peer Group
Center alternate representative to Bellcore's Early Career Advisory Program Committee
Center Management Committee Member - address career development issues
Division Education and Training Coordinator
Session Chair, Army Research Office Workshop on System Reliability
Developed two modules of Bellcore's Reliability Workshop

Bell Telephone Laboratories *Naperville, IL 1978 - 1983*

Member of Technical Staff, System Analysis and Human Factors Group
Member of Technical Staff, Network and Processor Utilization Group
Additional: Bell Telephone Laboratories Statistics Day Committee Member (1980 - 1983)

Southern Methodist University *Dallas, TX 1973 - 1978*

Department of Statistics
Research Assistant, Office of Naval Research Grant
Teaching Assistant
Teaching Instructor

Texas Instruments *Dallas, TX 1976 (summer student intern)*

Ecological Services Group, Statistical Consultant/Analyst

PUBLICATIONS

1. Joni Blake, Melissa Bowles-Terry, N. Shirlene Pearson and Zoltan Szentkiralyi. The Impact of Information Literacy Instruction on Student Success: A Multi-Institutional Investigation and Analysis. Greater Western Alliance Research Study, October 2, 2017.
2. Pearson, N. Shirlene. *Greater Western Library Alliance Library Training Study*, January 31, 2017. Unpublished manuscript commissioned by GWLA and provided to all library deans of the universities who are members of GWLA.
3. Melissa Bowles-Terry, Head of Educational Initiatives, UNLV Libraries; Zoltán Szentkirályi, Director of Assessment, SMU CUL; N. Shirlene Pearson, PhD, Pearson Statistical Consulting & Expert Testimony. *The Impact of Library Instruction Programs on Student Success and Retention: A Multi-Institution Study*, scheduled for presentation on February 27, 2017 at a GWLA conference.
4. Dennis R. Hoffman, Ph.D., Dianna K. Hughbanks-Wheaton, M.S., Ph.D., Rand Spencer, M.D., Gary E. Fish, M.D., N. Shirlene Pearson, Ph.D., Yi-Zhong Wang Ph.D., Martin Klein, M.S., Alison Takacs, B.S., Kirsten G. Locke, R.N., and David G. Birch, Ph.D. *Docosahexaenoic Acid Slows Visual Field Progression in X-Linked Retinitis Pigmentosa: Ancillary Outcomes of the DHAX Trial*. Investigative Ophthalmology & Visual Science, October 2015, Vol. 56, No. 11.
5. Dianna Wheaton, David Birch, Gary Fish, Rand Spencer, N. Shirlene Pearson, Alison Takacs, and Dennis Hoffman, *Safety Assessment of Docosahexaenoic Acid (DHA) Supplementation in a 4-Year Randomized Clinical Trial in X-linked Retinitis Pigmentosa (XLRP)*. Investigative Ophthalmology & Visual Science, June 24, 2014.
6. Dennis R. Hoffman, Ph.D., Dianna K. Hughbanks-Wheaton, Ph.D., N. Shirlene Pearson, Ph.D., Gary E. Fish, M.D., Rand Spencer, M.D., Alison Takacs, B.S., Martin Klein, M.S., Kirsten G. Locke, R.N., and David G. Birch, Ph.D., *A 4-year randomized, placebo-controlled clinical trial of DocosaHexaenoic Acid in X-linked retinitis pigmentosa: The DHAX Trial*. JAMA Ophthalmology, May 7, 2014.
7. Dennis Hoffman, Dianna Hughbanks-Wheaton, Gary Fish, Rand Spencer, Shirlene Pearson, Alison Takacs, Martin Klein, Kirsten Locke, David Birch. *High Dose Docosahexaenoic Acid in X-linked Retinitis Pigmentosa (The DHAX Trial) A 4-Year Randomized, Controlled Clinical Trial*. Annual meeting of The Association for Research in Vision and Ophthalmology, May 8, 2014. Presenters: Hoffman, Wheaton, Spencer and Fish.
8. Kotsanis, Constantine A., MD, MD(H), CCN, Marge Woodward, and N. Shirlene Pearson, PhD, *IPTLD Quality of Life Broad Study*, 2012 Tenth Annual International IPT/IPTLD Integrative Cancer Conference. April 27-28, 2012.
9. Pearson, N. Shirlene, *Introduction to Clickers & Test Questions Using Them (assessing classroom learning outcomes in real time)*, Southwest Regional Conference Educause 2010: Uncommon Thinking for the Common Good. February 17, 2010.
10. Pearson, N. Shirlene, *Introduction to Clickers & Test Questions Using Them (assessing classroom learning outcomes in real time)*, Southwest Regional Conference Educause 2010: Uncommon Thinking for the Common Good. February 17, 2010.
11. Numerous confidential reports in support of projects relating to statistical expert testimony, statistical litigation support and other statistical consulting activities.

12. Pearson, N. S. *SONET Network Availability Models*, MCI WorldCom, confidential technical document, 1998.
13. Pearson, N. S. *Dual Ring Availability Analysis*, MCI WorldCom, confidential technical analysis document, 1998.
14. Pearson, N. S. *Availability Analysis Tool Requirements*, MCI WorldCom, confidential technical document, 1998.
15. Pearson, N. S. *OC-48 Line Performance Study*, MCI WorldCom, confidential study, 1997.
16. Pearson, N. S. *Network Reduction*, Applied Research Laboratories, The University of Texas at Austin. Internal document, 1997.
17. Pearson, N. S. *Ellipsoidal Geodesy*, Applied Research Laboratories, The University of Texas at Austin. Unpublished manuscript, 1995.
18. Pearson, N. S. *Dynamic Allocation of Probability Thresholds for Radio Frequency Mission Planner Acquisition Missions*, Applied Research Laboratories, The University of Texas at Austin, White Paper, 1995.
19. Pearson, N. S. and P. Welton, *Survey of Modern Optimization Methods*, Applied Research Laboratories, The University of Texas at Austin, Lab Report, 1994.
20. Chaddha, R. L., A. W. King, and N. S. Pearson, *Providing Buyer Feedback on Digital Switch Field Performance*, IEEE Journal on Selected Areas in Communications, October, 1988.
21. Chaddha, R. L., A. W. King, and N. S. Pearson, *Providing Buyer Feedback on Digital Switch Field Performance*, IEEE International Conference on Communications, June 7-10, 1987. Presenter: N. S. Pearson.
22. Pearson, N. S. and G. G. Brush, *Framework for Software-Quality Life-Cycle Data and Metrics*, Bell Communications Research, Technical Memorandum, TM-TSY-008710, March 13, 1987.
23. Pearson, N. S., Several restricted publications of Reliability Review Forum activities for a major telecommunications supplier and field performance studies of their large switching system. Bell Communications Research, 1984 - 1986.
24. Pearson, N. S., Several Bell Communications Research Technical Analysis Reports of operator services and telecommunications switching systems suppliers, Bell Communications Research, 1986 - 1989.
25. Pearson, N. S., *4 ESS - Preliminary Guidelines for Memory and Disk Engineering for 4E9 Features*, Bell Telephone Laboratories, Memorandum for File, July 22, 1983.
26. Pearson, N. S., *4E9/APS Disk Engineering*, Bell Telephone Laboratories, Private Communiqué, July 15, 1983.
27. Pearson, N. S., *Proposed Expansion of S Graphics*, Bell Telephone Laboratories, Memorandum for File, July 14, 1982.
28. Pearson, N. S. and J. L. Santee, *T/C CPT Analysis System Measurement Requirements*, Bell Telephone Laboratories, Memorandum for File, April 28, 1982.
29. Pearson, N. S., *No. 2BE3 Main Processor Simulator and Study Results*, Bell Telephone Laboratories, Memorandum for File, December 11, 1981.
30. Pearson, N. S., *No. 2BE3-RSS Traffic Measurements Requirements*, Bell Telephone Laboratories, Memorandum for File, 1981.

31. Pearson, N. S., *2BE3 Post-cutover Capacity Determination - Requirements for EADAS/NORGEN*, Bell Telephone Laboratories, Memorandum for File, 1981.
32. Pearson, N. S., *2B-EF-2 and 2BE3 Register Requirements for EADAS/NORGEN*, Bell Telephone Laboratories, Memorandum for File, 1981.
33. Pearson, N. S., *No. 2B-EF-2 Post-cutover Processor Capacity - Worksheets for a Semi-automated Procedure*, Bell Telephone Laboratories, Memorandum for File, 1981.
34. Pearson, N. S., *No. 2B-EF-2 Post-cutover Processor Capacity Determination*, Bell Telephone Laboratories, Memorandum for File, 1981.
35. Pearson, N. S., *No. 2B-EF-1 Post-cutover Processor Capacity Determination*, Bell Telephone Laboratories, Memorandum for File, 1981.
36. Pearson, N. S., *No. 2ESS Percent Call Carrying Capacity*, Bell Telephone Laboratories, Memorandum for File, 1980.
37. Pearson, N. S., *Proposed Revision of Line Scanning Strategy for No. 2B ESS*, Bell Telephone Laboratories, Memorandum for File, August 13, 1980.
38. Pearson, N. S., *Post-cutover Processor Capacity Determination - No. 2B ESS Manual Procedure*, Bell Telephone Laboratories, Memorandum for File, March 28, 1980.
39. Pearson, N. S., *Algorithmic Call Type Definitions for Current Local ESSs and Measurement Specifications*, Bell Telephone Laboratories, Memorandum for File, December 12, 1979.
40. Pearson, N. S., *Generating Telephone Traffic*, Bell Telephone Laboratories, Private Communiqué, June 18, 1979.