

CURRICULUM VITA

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MICHAEL T. LONGNECKER

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DATE AND PLACE OF BIRTH: November 17, 1946, Shelby, Michigan

EDUCATION:

1976 Ph.D., Statistics, Florida State University, Tallahassee, FL.
1972 M.A., Statistics, Western Michigan University, Kalamazoo, MI.
1968 B.S., Mechanical Engineering, Michigan Technological University, Houghton, MI.

EXPERIENCE:

2004-2005 Interim Department Head, Department of Statistics, Texas A&M University-CS.
2000- Associate Department Head, Department of Statistics, Texas A&M University-CS.
2000- Director of Consulting Center, Department of Statistics, Texas A&M University-CS.
1987- Director of Statistical Internship Program, Texas A&M University-CS.
1999-2002 Statistical Consultant, CERH, Texas A&M University-CS.
1992- Professor, Department of Statistics, Texas A&M University-CS.
1990-91 Statistical Consultant, College of Vet. Medicine, Texas A&M University-CS.
1989-90 Visiting Associate Professor, Department of Statistics, Univ. of Wisconsin-Madison.
1984-1992 Associate Professor, Department of Statistics, Texas A&M University-CS.
1982-95 Statistical Consultant, Texas Agricultural Experiment Station.
1979-81 Statistical Consultant, Texas Transportation Institute.
1977-84 Assistant Professor, Institute of Statistics, Texas A&M University-CS.
1976-77 Visiting Assistant Professor, Department of Statistics, Florida State University.
1968 Pipeline Engineer, Shell Oil Company.

FUNDED SUPPORT:

2004-2007 USDA, Enhancing the Use of Small Ruminants to Control Noxious Weeds \$65,000 (John Walker, Rodney Kott, Andres Cibilis).

2004 NSF, Improving the Quality of and Access to Undergraduate Statistics Education \$55,000 (With Michael Speed, Jane Schielack, Kathleen Speed).

1999-2002 Center for Environmental and Rural Health, Statistical Consultant on numerous projects, \$9,000 (annually).

1996-2002 Texas Shrimp Association (Through LGL Ecological Research Associates, Inc.) “Evaluation of NMFS Techniques for Estimation of Red Snapper Bycatch in the Gulf of Mexico Shrimp Fishery”, \$20,000.

1997-2000 Texas Water Board, “Developing Harvest and Salinity Regression Equations for Sabine and Baffin Bays’ ’, \$80,000, (with Dr. Michael Speed).

1997-1999 Robert Wood Johnson Foundation, “Nursing Workforce: Beyond 2000”, \$20,000, (with Dr. Claudia Johnston).

1997-1998 Dr. Steve Archer, Department of Rangeland Ecology, \$5,500.

1997-1998 Dr. Jim Keeton, Department of Animal Science, \$1,000.

1996-1997 Texas Water Board, “Harvest vs. Freshwater Inflows in Galveston, Corpus Christi and Aransas Bays”, \$8,000, (with Dr. Michael Speed).

1995-1996 Texas Parks and Wildlife Department, “Status and Trends of Selected Marine Fauna in the Corpus Christi Bay National Estuary Program Study Area”, \$20,000.

1994-1995 USDA/CSRS “Cattle-Landscape Interactions: Ecological Basis for Tick and Horn Fly IPM ”, \$100,000 (with P. Teel, D. Bays, J. Stuth, W. Grant).

1993-1994 USDA/Formula Animal Health Program: “Texas Cattle Fever: Effects of Host-landscape Interactions on Dispersal and Maintenance of Tick Vectors”, \$44,000 (with P. Teel, G. Wagner, W. Grant).

1992 Research Grant—Shell Development Company, \$7,500.

1990-1992 USDA/CSRS “Manipulation of Cattle-Vegetation-Tick Interactions: Unexplored IPM Strategies”, \$115,000 (with P. Teel, D. Bay, S. Archer).

1991 Research Grant—Shell Development Company, \$7,500.

1991 Animal Health Funds “Risk Assessment of Texas Cattle Fever: Epidemiologic Assumptions for Boophilus Tick Eradication”, \$45,000 (with P. Teel).

1982-95 Texas Agricultural Experiment Station, \$100,000.

1990-91 College of Veterinary Medicine, \$18,000.

1989-90 Research Grant—Shell Development Company, \$20,000.

1988 Department of Veterinary Anatomy, \$4,500.

1986-87 Houston Light and Power, \$5,000.

1979-81 Texas Transportation Institute, \$15,000.

PROFESSIONAL ACTIVITIES:

- 2008-2011 Member of ASA Committee on Membership Retention and Recruitment
- 2003-2005 Member of ASA Committee on Statistics and Disabilities
- 2003-2005 Member of ASA Graduate Education and Research Taskforce
- 1998-2001 Member of ASA Subcommittee on Organizational Membership
- 1998-2001 Member, Gulf of Mexico Fishery Management Council Standing and Special Reef Fish Scientific and Statistical Committee
- 1998-99, 86-87 President, Southeast Texas Chapter of American Statistical Association.
- 1997-98, 85-86 Vice-President, Southeast Texas Chapter of American Statistical Association.
- 1989-92 Associate Editor, *Journal of American Statistical Association*
- 1987-89 Associate Editor, *The American Statistician*.
- 1984-89 Member, Committee of President of Statistical Societies/Visiting Lecturer Program in Statistics.
- 1977-2008 Referee of research articles for JASA, Technometrics, The American Statistician, IEEE Transactions on Reliability, Statistics & Probability Letters, Communications in Statistics.
- 1977-2008 Review textbooks for John Wiley & Sons, Duxbury Press, Prentice Hall.
- 1977-2008 Chaired numerous sessions at JSM.

MAJOR RESEARCH INTERESTS:

Statistical Consulting, Statistical Education.

HONORS AND AWARDS:

- 2009 Elected Fellow of American Statistical Association
- 2007 Western Michigan University Alumni Achievement Award
- 2004 Finalist for the Texas A&M University Presidential Professor for Teaching Excellence, \$10,000 Award
- 1994 The Association of Former Students of Texas A&M University, Faculty Distinguished Award in Teaching.
- 1989-90 Faculty Academic Study Leave at Department of Statistics, University of Wisconsin-Madison.
- 1982 The Association of Former Students of Texas A&M University, College of Science, Distinguished Teaching Award.
- 1973 Outstanding Graduate Student Award, Department of Statistics, Florida State University.
- Phi Eta Sigma(President,1967/68), Tau Beta Pi, and Phi Kappa Phi, Michigan Technological University.

SOCIETY MEMBERSHIP:

American Statistical Association
Institute of Mathematical Statistics
The International Biometric Society
American Society for Quality

COMMITTEE CHAIRMANSHIPS:

PhD Committees

Frederic Che-Yuen, Ph.D., August 1982. Nonparametric Tests for Homogeneity of the Marginal Distributions of Paired Data.

Edgar Wayne Richardson, Ph.D., August 1986. Asymptotic Normality of the Parameters of Certain Mixtures of Discrete and Continuous Distributions.

Dennis W. King, Ph.D., August 1988. Nonparametric Procedures for Process Control.

Randy Bartlett, Ph.D., May, 1993. Measures of Capability Under Nonstandard Conditions.

Diane Davies, Ph.D., May, 1994. Statistical Process Control for Correlated Data.

Qinli Yue, Ph.D., December, 1996. Chemometric Calibration and Partial Least Squares.

Abeer Al-Khouli, Ph.D., December, 1999. Robust Estimation and Bootstrap Testing for the Delta Distribution with Applications in the Marine Science.

Yibing Zhong, Ph.D., December, 2000. The Spatial Modeling of a Mixture Distribution.

Master of Science Committees

Chair of 75 M.S. Students Committees

PUBLICATIONS:

1. 1977 "General moment and probability inequalities for the maximum partial sum," *Acta Math. Acad. Sci. Hungar.* **30**, 129-133. With R. J. Serfling.
2. 1978 "Moment inequalities for S_n under general dependence restrictions," *Z. Wahr. verw Gebiete* **43**, 1-21. With R. J. Serfling.
3. 1982 "Generalized SLLN under weak multiplicative dependence restrictions," *Acta Math. Acad. Sci. Hungar.* **40**, 153-157.
4. 1983 "Optimal stopping under general dependence conditions," *Canadian Math. Bulletin* **26**, 260-266.
5. 1983 "Probability distribution functions for generation reliability indices," *IEEE Transactions on Power Apparatus Systems* **102**, 1486-1493. With M. Sahinoglu, L. Ringer, C. Singh and A. Ayoub.

6. 1983 "A modified Wilcoxon rank sum test for paired data," *Biometrika* **70**, 510-513. With F. Lam
7. 1985 "Dikegulac alters growth and flowering of Kalauchoe," *Hortscience* **20**, 722-724. With S. E. Cross and A. Nightingale.
8. 1987 "Effects of Microwave Treatment of Live Oak Acorns on Germination and on *Curculio* sp. Larvae," *Journal of Economical Entomology* **80**, 916-920. With Robert L. Crocker and David L. Morgan.
9. 1988 "Growth of live oak from seed hydrothermally treated to control larvae of acorn weevil," *Hortscience* **23**, 777-788. With R. Crocker and D. Morgan.
10. 1988 "Relationship of Fiber Measurements to Spinning", published in the *Proceedings of American Society of Agricultural Engineers*, Summer Meeting at Rapid City, SD. With S. Searcy.
11. 1989 "Using ultrasound, linear measurements and live fat thickness estimates to determine the carcass composition of market lambs," *J. Animal Science* **67**, 3322-3330. With J. W. Edwards, R. C. Cannell, R. P. Garrett, J. W. Savell, H. R. Cross.
12. 1990 "Bioassay analysis of dry-cured ham processed to affect *Trichinella spiralis*," *J. Food Science* **55**, 289-297. With K. W. Lin, J. T. Keeton, T. M. Craig, R. H. Huey, H. R. Gamble, C. S. Custer, H. R. Cross.
13. 1990 "Effects of sequential infestations of *Dermacenter albipictus*, and *Amblyomma americanum* (Acari: Ixodidae), on overwintering beef cows in west-central Texas," *J. Medical Entomology* **27**, 632-641. With P. D. Teel, T. W. Fuchs, J. E. Huston, S. L. Pickel.
14. 1990 "Computing the distribution of the Wilcoxon statistic with applications to process control," *Communications in Statistics-Simula* **19**, 381-399. With D. W. King.
15. 1990 "The calculation of average run length for a nonparametric cusum procedure," *SUGI15*, 487-493. With D. W. King.
16. 1991 "Dynamic identity verification via keystroke characteristics". *International Journal of Man-Machine Studies* **35**, 859-870. With J. Leggett, G. Williams, M. Usnick.
17. 1991 "Modeling embryo development and emergence in *Boophilus Annulatur* (Acari:Ixodidae)," *J. Medical Entomology*, **28**, 165-173. With O. F. Strey, P. D. Teel, and D. R. Ring.
18. 1991 "Cryopreservation of Atlantic Croaker spermatozoa." *Aquaculture* **94**, 355-375. With J. Gwo, K. Strawn, and C. Arnold.
19. 1991 "Use of orthopedic markers for quantitative determination of proximal radial and ulnar growth in foals," *American J. of Veterinary Research* **52**, 1456-1460. With B. Smith, J. Auer, T. Taylor, and D. Hulse.
20. 1992 "Incidence of *Caloglyphus-phasphylopagianus*(Acari: Acaridue) on adult phyllophaga SPP and other scarabaeidae in North Central Texas," *Annals of Entomological Society of America* **85**, 462-468. With R. Crocker, W. Woodward.
21. 1993 "Cofactor effect of feline syncytium-forming virus on feline immunodeficiency virus-infection." *American Journal of Veterinary Research* **54**, 713-718. With E. Collisson, A. Wolf, N. Peterson, W. Brown, E. Zenger.
22. 1993 "Tracheal mucociliary transport rate in the awake dog ." *American Journal of Veterinary Research* **54**, 1812-1816. With H. Boothe, D. Boothe, A. Komkov, D. Hightower.
23. 1993 "Measurement of vertical ground reaction force in jumping dogs." *Veterinary and Comparative Orthopedics and Trauma* **5**, 44-50. With S. Yanoff, M. Slater, D. Holse.

24. 1996 "Survival and water balance characteristics of unfed adult Cayenne ticks, *Amblyomma cajennense* (Acari: Ixodidae)." *Journal of Medical Entomology* **33**, 63-73. With O. Strey, P. Teel, G. Needham.
25. 1996 "Effects of red imported fire ant on newly-hatched Northern Bobwhite." *Journal of Wildlife Management* **60**, 164-169. With E. Pedersen, W. Grant.
26. 1997 "On confidence interval for the probability of success." *The Korean Communications in Statistics* **3**, 263-269. With S. Lee and C. Kim.
27. 1997 "Regeneration of *Scirpus Americanus* in a Texas Coastal Marsh Following Lesser Snow Goose Herbivory." *Wetlands* **17**, 31-42. With D. Miller, F. Smeins, J. Webb.
28. 1997 "Shrimp Trawl Bycatch Estimates of Red Snapper (*Lutjanus campechanus*) in the Gulf of Mexico." *15th Lowell Wakefield Fisheries Symposium: Fishery Stock Assessment Models for the 21st Century*, October 8-11, 1997. With B.J. Gallaway, J.G. Cole and R.M. Meyer.
29. 1998 "Low-fat bologna in a model system with varying types and levels of Jonjac Blends." *Journal of Food Science* **63**, 808-813. With K.B. Chin, J.T. Keeton and J.W. Lamkey.
30. 1998 "Functional, textural and microstructural properties of low-fat bologna (model system) with a Konjac blend." *Journal of Food Science* **63**, 801-807. With K.B. Chin, J.T. Keeton and J.W. Lamkey.
31. 1998 "The development and evaluation of CUSUM-based control charts for an AR(1) process." *Institute of Industrial Engineers Transactions* **30**, 525-534. With D.H. Timmer and J.J. Pignatiello.
32. 1999 "Effects of Subsidized House Cats on California Birds and Rodents ." *Transactions of Western Section of the Wildlife Society* **35**, 29-33. With C.C. Hawkins and W.E. Grant.
33. 1999 "Utilization of soy protein isolate and konjac blends in a low-fat bologna (model system)." *Meat Science* **53**, 45-57. With K.B. Chin, J.T. Keeton and J.W. Lamkey.
34. 2000 "Applying an AR(1) CUSUM Control Chart to Data from a Chemical Process." *Quality Engineering* **13**, 107-114. With D.H. Timmer and J.J. Pignatiello.
35. 2000 "Evaluation of konjac blends and soy protein isolate as fat replacements in low-fat bologna." *Journal of Food Science* **65**. With K.B. Chin, J.T. Keeton, R.K. Miller and J.W. Lamkey.
36. 2001 "Annual rainfall, topoedaphic hetorgeneity and growth of an arid land tree (*Prosopis glandulosa*).", *Journal of Arid Environments* **48**, 23-33. With D. Miller, S. Archer, and S. Zitzer).
37. 2001 "Effects of Pyriproxyfen on Off-Host Water-Balance and Survival of Adult Lone Star Ticks." *Journal of Medical Entomology* **38**, 589-595. With O.F. Strey and Pete Teel.
38. 2002 "Comparison of Dog's Reactions to Four Different Head Collars." *Applied Animal Behaviour Science* **79**, 53-61. With L. Haug.
39. 2003 "Description of a Electronic Logbook Designed to Measure Effort in the Gulf of Mexico Shrimp Fishery." *Journal of Fisheries Management* **23**, 581-589. With B. Gallaway, J. Cole, L. Martin, J. Nance.
40. 2003 "Simulating Biophysical and Human Factors that Effect Detection Probability of Cattle Fever Ticks (*Boophilus* sp.) in Semi-arid Thornshrublands of South Texas." *Ecological Modelling* **170**, 29-43. With P.D. Teel, M.S. Corson, W.E. Grant
41. 2003 "An Evaluation of an Electronic Logbook (ELB) as a More Accurate Method of Estimating Spatial Patterns of Trawling Effort and Bycatch in the Gulf of Mexico Shrimp Fishery." *Journal of Fisheries Management* **23**, 787-809. With B. Gallaway, J. Cole, L. Martin, J. Nance.

42. 2003 "Effect of red imported fireants on habitat use by Hispid Cotton Rats(it Sigmodon Hispidus and Northern Pygmy Mice (*Baiomys Taylori*).” *The Southwestern Naturalist* **48**, 419-426. With E. Pedersen, T. bedford, W. Grant, S. Vinson, and J. Martin.
43. 2005 "Feeding predilection of Gulf Coast tick, *Amblyomm a maculatum Koch*, nymphs on cattle”, *Veterinary Parasitology* **133**, 349-356. With H. Williams-Ketchum, P. Teel, O. Strey.
44. 2006 "Mating success of two geographically distinct populations of Gulf Coast ticks, *Amblyomm a maculatum Koch*”, *Veterinary Parasitology* **140**, 143-147. With H. Williams-Ketchum, P. Teel, O. Strey.
45. 2006 "Spatial Allocation of Shrimp Catch Based Upon Fishing Effort”, *North American Journal of Fisheries Management* **26**, 789-792. With J. Cole, B. Galloway, L. Martin, J. Nance.
46. 2006 "Pharmacodynamics of Carvedilol in Health, Conscious Dogs”, *Journal of Veterinary Internal Medicine* **20**, 297-304. With S. Gordon, W. Arsenault, D. Booth, M. Miller, J. Chalkley.
47. 2008 "Tolerance and compensatory response of rice to sugarcane borer (Lepidoptera: Crambidae) injury”, *Environ. Entomol.* **37**, pp. 796-807. With J. Lv and L.T. Wilson.
48. 2009 "Genetic variation in the 12S and 16S Mitochondrial fdNA genes of four geographically isolated populations of Gulf Coast ticks, *Amblyomma maculatum Koch*”, *Journal of Medical Entomology* **46(3)**, 482-489. With H. Ketchum, P. Teel, C. Coates, and O. Strey.
49. 2010 "Host selection by questing female *Amblyomma maculatum Koch*”, to cattle feeding male ticks in southern Texas”, *Veterinary Parasitology* **172**, 105-108. With S.B. Sleeba, P. Teel, and O. Strey.
50. 2010 "Transcriptional overexpression of CYP6B8/CYP6B28 and CYP6B9 is a mechanism associated with cypermethrin survivorship in field collected *Helicoverpazea* (Lepidoptera: Noctuidae) moths”, *Pest Management Science* **To Appear**. With BW Hopkins and P Pietrantonio.

BOOKS

- 2009 *An Introduction to Statistical Methods and Data Analysis, 6th Ed.*, 2009, Brooks/Cole, co-author Lyman Ott.
- 2003 *A First Course in Statistical Methods*, 2003, Duxbury Press, co-author Lyman Ott.

UNPUBLISHED TECHNICAL REPORTS:

- 1975 "An annotated bibliography of selected references on maximal inequalities and their applications,” *Florida State University, Department of Statistics Technical Report*. With R. J. Serfling.
- 1976 "A note on applications of a lemma of Billingsley.” *Florida State University, Department of Statistics Technical Report*. With R. J. Serfling.
- 1976 "On almost sure convergence of infinite series.” *Florida State University, Department of Statistics Technical Report*. With R.J. Serfling.
- 1978 "Hypothesis testing in the multivariate binomial.” *Texas A&M University, Department of Statistics Technical Report*. With E. Gbur.
- 1980 "The 1980 calibration, correlation, and evaluation of the FHWA Area Reference Skid Measurement Systems.” With A. Stocker and R. Zimmer.

- 1981 "The effect of pairing on the asymptotic distribution of a class of nonparametric tests." *Texas A&M University, Department of Statistics Technical Report*. With F. Lam.
- 1982 "A modified Savage test for bivariate exponential data." *Texas A&M University, Department of Statistics Technical Report*. With F. Lam.
- 1986 "The asymptotic distribution for parametric estimators from discrete-continuous mixtures." *Texas A&M University, Department of Statistics Technical Report*. With E. Richardson.
- 1987 "A statistical improved procedure for setting MDNBR limits." *Texas A&M University, Department of Statistics Technical Report*. With F. Best and H. Giap.
- 1987 "Logistic Regression: A method to compare several competing models using SAS LOGIST and CAT-MOD Output." *Texas A&M University, Department of Statistics Technical Report*. With K. Ludke.
- 1991 "Pin Loosening in External Skeletal Fixation: The Effects of Pin Design and implantation Site in the Canine Tibia." With R. Palmer, D. Ulse, F. Pollo, and W. Hyman.
- 1992 "Asymptotic distribution of the CUSUM run length," *Texas A&M University, Department of Statistics Technical Report*. With D. King.
- 1992 "A deficiency in residuals charts for correlated data," *Texas A&M University, Department of Statistics Technical Report*. With T.P. Ryan
- 1992 "Performance of CUSUM, EWMA and MOSUM control charts under a linear trend," *Texas A&M University, Department of Statistics Technical Report*. With D. King
- 1992 "Average Run Lengths for the EWMA under a linear trend." *Texas A&M University, Department of Statistics Technical Report*. With S. Leu.
- 1997 "Statistical Quality Control Procedures in Food Safety and Inspection". *USDA/Food Safety and Inspection Service Technical Report*.

TEACHING EXPERIENCE AND ACTIVITIES:

I. Courses Taught:

A. Undergraduate Courses:

Course Title	Description
201-Elementary Statistical Inference	Data collection, summaries, variability
211-Principles of Statistics I	Introduction to probability, distributions, expectation, inference
212-Principles of Statistics II	DOE, regression, categorical data, non-parametric methods
303-Statistical Methods	Introduction to statistical methods for social scientist
414-Mathematical Statistics	Introduction to mathematical statistics

B. Graduate Courses:

Course Title	Description
601-Statistical Analysis	Introduction to distributions, ANOVA, regression
608-Regression Analysis	Regression theory and applications
609-Nonparametric Methods	Application of distribution-free methods
610-Theory of Statistics-Distribution Th.	Introduction to probability and distribution theory
611-Theory of Statistics-Inference	Theory of estimation and testing
613-Advanced Theory of Stat. Inference	Theory of point estimation and testing
619-Design and Analysis of Exper.	Design of experiments and ANOVA
620-Large Sample Theory	Transformations, statistical functionals, central limit theorems
625-Reliability	Statistical methods for engineering reliability
634-Response Surface Design	Design and analysis of efficient designs
641-Statistical Methods-I	Introduction to statistical modelling and data analysis
642-Statistical Methods-II	Design and analysis of experiments
651-Statistics in Research-I	A non-calculus survey of statistical methods, Part I
652-Statistics in Research-II	A non-calculus survey of statistical methods, part II
689-Theory of Rank Based Procedures	Theory of rank based estimation and testing
689-Statistical Quality Control	The theory of SPC

II. Graduate Student Supervision: 1979 to 2010

Chairman of 8 Ph.D. Committees

Chairman of 75 Masters Committees

Member of 72 Statistics Ph.D. Committees

Member of 80 Statistics Masters Committees

Member of 320 non-Statistics Ph.D. and Masters Committees (By College):

Agriculture	75 Students	Liberal Arts	5 Students
Architecture	4 Students	Science	21 Students
Education	7 Students	Engineering	175 Students
Geoscience	19 Students	Business	14 Students