

CURRICULUM VITAE: Tom Gerig
Professor
Department of Statistics
North Carolina State University
Raleigh, NC 27695-8203

Education

George Washington University, Statistics, AB 1965

University of North Carolina, Chapel Hill, Statistics Ph.D. 1971

Professional Appointments

- 2006 Retired June 30, entered 3 year Phased Retirement Program
- 2002-2006 Assistant Director, National Institute of Statistical Sciences, RTP, NC
- 2002-2006 Professor, Department of Statistics, North Carolina State University, Raleigh, NC
- 1994-2002 Professor and Head, Department of Statistics, NC State University, Raleigh, NC
- 1983-1994 Professor and Director of Graduate Programs, Department of Statistics, NC State University, Raleigh, NC
- 1980-1983 Professor, Department of Statistics, NC State University, Raleigh, NC
- 1978-1979 Visiting Associate Professor, Department of Statistics, University of Waterloo, Waterloo, Canada
- 1974-1980 Associate Professor, Department of Statistics, NC State University, Raleigh, NC
- 1969-1974 Assistant Professor, Department of Statistics, NC State University, Raleigh, NC

Awards

- 1990 Advocacy Award, Association for the Concerns of African-American Graduate Students, NCSU
- 1990 D.D. Mason Faculty Award, Department of Statistics, NCSU

Publications

- Gerig, Thomas M. (1969). A multivariate extension of Friedman's χ^2_r -test. *JASA* 64, p 1595-1608.
- Gallant, A. R., Thomas M. Gerig, and J. W. Evans (1974). Time series realizations obtained according to an experimental design. *JASA* 69, p 639-645.
- Gallant, A. Ronald and Thomas M. Gerig (1975). Computing methods for linear models subject to linear parametric constraints. *Proceedings of Computer Science and Statistics: Eighth Annual Symposium on the Interface*, Los Angeles, CA, February 13-14, 1975.

- Gerig, Thomas M. (1975). A multivariate extension of Friedman's χ^2_r -test with random covariates. *JASA*, 70, p 443-447.
- Gerig, Thomas M. and A. Ronald Gallant (1975). Computing methods for linear models subject to linear parametric constraints. *J. Statist. Comput. Simul.*, 3, p 283-296.
- Sen, A. R. and Thomas M. Gerig (1975). Estimation of population means having equal coefficients of variation on successive occasions. *Proceedings 40th Session of the International Statistical Institute*, Warsaw, September 1-9, 1975.
- Gerig, Thomas M., H. T. Schreuder, D. M. Crutchfield, and C. G. Wells (1978). The two-way median fit: a sensitive procedure to detect response of trees to fertilization. *Forest Science*, 24, p 358-362.
- Gerig, Thomas M. and A. R. Gallant, editors (1978), *Proceedings of the Computer Science and Statistics: Eleventh Annual Symposium on the Interface*, Raleigh, NC.
- Gerig, Thomas M. and C. P. Zarate-de-Lara (1979). Estimation on modelos lineales usando un criterio direccionalmente minima sobre la traza del cuadrado medio del error. *Agrociencia*, 6, p 10-17.
- Gerig, Thomas M. and A. R. Gallant (1980). Computations for constrained linear models. *Journal of Econometrics*, 12, p 59-84.
- Gerig, Thomas M. and A. R. Sen (1980). MLE of the parameters of two normal populations when the coefficients of variation are equal but unknown. *JASA*, 75, p 704-708.
- Gerig, Thomas M. and Patrick H. A. Miller (1981). Synthetic estimation based on incomplete symptomatic information. *ASA Proceeding of Survey Research Methods Section*, p 689-694.
- Gerig, Thomas M. (1981). Advances in the analysis of categorical data. Technical Report, Colegio de Postgraduados, Chapingo, Mexico.
- Gerig, Thomas M. and Teresa Lopez-Aguirre (1982). Handling underspecification of symptomatic information in synthetic estimation. *Proceedings of COMPSTAT 82*.
- Jones, L. A. and Thomas M. Gerig (1983). Optimization of separation number in gas chromatography in fused silica capillary columns and temperature programmed conditions. *Analytical Chemistry*, 55, p 1354-60.
- Abd-Rahman, Mohd. Nawi and Thomas M. Gerig (1983). An efficient likelihood solution for normal models having constant but unknown coefficients of variation. *Pertanika*, Vol. 6, No. 1, p 57-62.
- Sinha, B. K. and Thomas M. Gerig (1984). On further characterization of dispersion matrices based on the properties of regression. *Journal of Statistical Planning and Inference*, Vol. 10, p 265-271.
- Gerig, Thomas M. and T. Lopez (1984). Synthetic estimation when only partial information is available. *ASA Proceedings of Survey Research*, p 819-824.
- Abd-Rahman, Mohd. Nawi and Thomas M. Gerig (1984). Efficiencies of maximum likelihood

estimators for the normal model under certain heteroscedasticity. *Pertanika* Vol. 7, No. 1, p 67-75.

Sinha, B. K. and Thomas M. Gerig (1985). On Neyman's conjecture: A characterization of the multinomials. *Journal of Multivariate Analysis*, Vol. 16, No. 3, p 440-450.

Gerig, Thomas M. and M. N. Abd-Rahman (1985). Estimation in a linear model with response-related error. *Communications in Statistics: Simulation and Computation*, Vol 14, No. 1, p 71-83.

Gerig, Thomas M. and Cook, John R. (1986). Modeling the reliability of fault-tolerant software systems. *Proceedings in Computational Statistics 1986*, p 37-42.

Jones, Louis A., Charles D. Burton, Thomas A. Dean, Thomas M. Gerig and John R. Cook (1987). Effects of starting temperature and temperature/pressure programming in optimization of gas chromatographic separation numbers. *Analytical Chemistry*, 59, p 1179-86.

Guy, James S., Michael G. Levy, David H. Ley, H. John Barnes and Thomas M. Gerig (1987). Experimental reproduction of enteritis in Bobwhite quail (*Colinus virginianus*) with *cryptosporidium* and Reovirus. *Avian Diseases*, 31, p 713-22.

Ley, D. J. Guy, M. Levy, A. Bermudez, J. Barnes and Thomas M. Gerig (1987). Avian cryptosporidiosis - An update. *Proceedings of the 36'th Western Poultry Disease Conference*, 36, p 52-54.

Bermudez, Alex J., David H. Ley, Michael G. Levy, Martin D. Ficken, James S. Guy and Thomas M. Gerig (1988). Intestinal and bursal cryptosporidiosis in turkeys following inoculation with *cryptosporidium* isolated from commercial poult. *Avian Diseases*, 32, p 445-50.

Guy, James S., Michael G. Levy, David H. Ley, H. John Barnes, and Thomas M. Gerig (1988). Interaction of reovirus and *cryptosporidium* baileyi in experimentally infected chickens. *Avian Diseases*, 32, p 381-390.

Levy, Michael G., David H. Ley, H. John Barnes, Thomas M. Gerig and Wayne T. Corbett (1988). Experimental cryptosporidiosis and infectious bursal disease virus infection of specific pathogen free chickens. *Avian Diseases*, 32, p 803-11.

Gerig, Thomas M., Udo Blum and Kristen Meier (1989). Statistical analysis of the joint inhibitory action of similar compounds. *Journal of Chemical Ecology*, 15, p 2403-2412.

Blum, Udo, Thomas M. Gerig and Sterling Weed (1989). Effects of mixtures of phenolic acids on leaf area expansion of cucumber seedlings grown in different pH Portsmouth A₁ soil materials. *Journal of Chemical Ecology*, 15, p 2413-2423.

Hurtado, Gerardo I. and Thomas M. Gerig (1989). Outlier selection in non-iid linear models with applications to variance components. *Proceedings of SUGI 1989*, SAS Institute Inc, Cary, N.C.

Lyu, Seung-Won, Udo Blum, Thomas M. Gerig and Timothy E. O'Brien (1990). Effects of mixtures of phenolic acids on phosphorous uptake by cucumber seedlings. *Journal of Chemical*

Ecology, 16, p 2559-2567.

Walker, Richard L., Russell T. Greene, Thomas M. Gerig (1990). Evaluation of four commercial anaerobic systems for identification of *Eubacterium Suis*. *Journal of Veterinary Diagnostic Investigation*, 2, p 318-322.

Gerig, Thomas M. and Udo Blum (1991). Effects of mixtures of four phenolic acids on leaf area expansion of cucumber seedlings grown in Portsmouth B₁ soil materials. *Journal of Chemical Ecology*, 17, p. 29-40.

Greene, R. T., D. A. Hirsch, P. L. Rottman and Thomas M. Gerig (1991). Interlaboratory Comparison of Titers of Antibody to *Borrelia burgdorferi* and evaluation of a commercial assay using canine sera. *Journal of Clinical Microbiology*, 29, p 1-6.

Blum, U., T. R. Wentworth, K. Klein, D. A. Worsham, L. D. King, Thomas M. Gerig and S.-W. Lyu (1991). Phenolic acid content of soils from wheat/no till, wheat/conventional till and fallow-conventional till soybean systems. *Journal of Chemical Ecology*, 17, p 1045-1068.

Gerig, Thomas M. (1991). Review of Electronic Table. *Decision Line*, 22, p 14-15.

Price, Sylvester G., Rodney L. Page, Bernard M. Fisher, Jay F. Levine and Thomas M. Gerig (1991). Efficacy and toxicity of doxorubicin-cyclophosphamide in dogs with multicentric lymphosarcoma. *Journal of Veterinary Internal Medicine*, 5, p 259-262.

Carbonell, E. A. and Thomas M. Gerig (1991). A program to detect linkage between genetic markers and non-additive quantitative trait loci. *Journal of Heredity*, 5, p 435.

Olivero, Dennis K., Michael G. Davidson, Robert V. English, Mark P. Nassisse, Vivian Jamieson and Thomas M. Gerig (1991). Clinical evaluating of topical 1% cyclosporin A for keratoconjunctivitis sicca. *Journal of the American Veterinary Medical Association*, 199, p 1039-1042.

Breitschwerdt, Edward B., Diane A. Hirakawa, Sue Ann Hurlbert, Thomas M. Gerig and Cynthia Babineau (1992). Effect of dietary protein source on Basenjis with immunoproliferative enteropathy. *American Journal of Veterinary Research*, 53, p 234-6.

Blum, Udo, Thomas M. Gerig, A.D. Worsham, L.D. Holappa and L.D. King (1992). Allelopathic activity in wheat-conventional and wheat-no-till soils: development of soil extract bioassays. *Journal of Chemical Ecology*, 18, p 2191-2221.

Carbonell, E. A., Thomas M. Gerig and M. J. Asins (1992). Interval mapping in the analysis of non-additive quantitative trait loci. *Biometrics*, 48, p 305-315.

Jones, Louis A., William H. Reiss, John J. Glennon and Thomas M. Gerig (1992). A van Deenter type relationship for determining the optimum initial flow and optimum pressure program rate in temperature/pressure programmed capillary column gas chromatography utilizing separation numbers. *Journal of Chromatography*, 595, p 221-236.

- Smith, S. A., E. J. Noga, M. G. Levy and Thomas M. Gerig (1993). Effect of serum from the fish, *oreochromis aureus*, immunized with dinospores of the parasitic dinoflagellate, *amyloodinium ocellatum*, on the motility, infectivity and growth of the parasite in cell culture. *Diseases of Aquatic Organisms*, 15, p 73-80.
- Gerig, Thomas M. and Udo Blum (1993). Modification of an inhibition curve to account for effects of a second compound. *Journal of Chemical Ecology*, 19, p 2783-2790.
- Blum, Udo, Thomas M. Gerig, A.D. Worsham, and L.D. King (1993). Modification of allelopathic effects of p-coumaric acid on morning-glory seedling biomass by glucose, methionine, and nitrate. *Journal of Chemical Ecology*, 19, p 2791-2811.
- Blum, U., A.D. Worsham, and L.D. King and Thomas M. Gerig (1994). Use of water and EDTA extractions to estimate available (free and reversibly bound) phenolic acids in Cecil soils. *Journal of Chemical Ecology*, 20, p 341-359.
- Jones, M. Gail and Thomas M. Gerig (1994). Ability Grouping and Classroom Interactions. *Journal of Classroom Interaction*, 29, p 27-34.
- Lehman, Mary E., Udo Blum and Thomas M. Gerig (1994). Simultaneous effects of ferulic and p-coumaric acids on cucumber leaf expansion in split-root experiments. *Journal of Chemical Ecology*, 20, p 1773-1782.
- Pue, K.J., Udo Blum, Thomas M. Gerig and S.R. Shafer (1995). Mechanism by which noninhibitory concentrations of glucose increase activity of p-coumaric acid on morning-glory seedling biomass accumulation. *Journal of Chemical Ecology*, 21, p 833-847.
- Gizlice, Z., T. E. Carter, Jr., Thomas M. Gerig, and J.W. Burton (1996). Genetic diversity patterns in North American public soybean cultivars. *Crop Sci.* 36, 753-765.
- Blum, Udo, Larry D. King, Thomas M. Gerig, Mary E. Lehman and Arch D. Worsham (1997). Effects of clover and small grain cover and tillage techniques on seedling emergence of some dicotyledonous weed species. *American Journal of Alternative Agriculture*, Volume 12, Number 4, pp 146-161.
- Blum, Udo and Thomas M. Gerig (2005). Relationships between phenolic acid concentrations, transpiration, water utilization, leaf area expansion, and uptake of phenolic acids: Nutrient culture studies. *Journal of Chemical Ecology*, Springer US. Volume 31, # 8, pp. 1907-1932.
- Gerig, Thomas M. (2005). Graduate Industrial Traineeship Program at NCSU. *Proceedings 2005 Joint Statistical Meetings* (sponsor: ASA Section on Statistical Education), pp. 2237-2239.
- Blum, Udo and Thomas M. Gerig (2006). Interrelationships between p-coumaric acid, evapotranspiration, soil water content, and leaf expansion. *Journal of Chemical Ecology*, Springer US. Volume 32.

Presentations

Summer Research Conference (1998). “Panel: Training Statisticians for Non-Academic Employment” Panel member.

Board on Mathematical Sciences Chairs Colloquium (2000). “Panel on Cross-Disciplinary Departmental Activities”.

Summer Research Conference (2000). “Panel: Statistical Training from Secondary through Post-Doctoral Levels” Panel member.

External funding – Training

The impact of my external funding activities has been primarily in the area of support for student training.

During my tenure 1983-1994 as Director of Graduate Programs, I initiated the **Graduate Industrial Trainee** (GIT) program and established the funding mechanism. Under this program I obtained funding for numerous Statistics and Biomathematics graduate students who benefited not only from the funding but also from the experience of serving as a trainee in a live corporate research and development setting. During this period there were years during which the total dollar amount received by the department approximated \$300,000. These funds allowed the department's graduate program to grow significantly and freed departmental State appropriated funds for use in other ways. The GIT program is still a cornerstone of the Statistics graduate program. The model is now being used with great success by the Bioinformatics Graduate Program.

In 1996 I was PI on a three year EPA grant titled "**Environmental Statistics Training Grant**", \$150,000.

I am the Principal Investigator of the department's successful five-year (1999-2004) **NSF VIGRE** program. This grant provides in excess of \$500,000 per year to support graduate, undergraduate and postdoctoral trainees. I served as a member of the team that developed a five-year renewal request for NSF VIGRE that is currently under review. Total funding to date: \$2.5M.

External Funding – Research

Five year grant (ending 1990) from USDA, Office of International Cooperation and Development, "Biometric Applications in Agronomy". Supported collaboration with E. Carbonell of Instituto Valenciano de Investigaciones Agrarias, \$85,750.

Doctoral Graduate Students

Else Clotilde Servy (1972) Dean, School of Statistics, University of Rosario, Argentina

Guillermo Pedro Zarate de Lara (1977), Senior Scientist, Frito-Lay Mexico

Mohd-Nawi Bin Abd-Rahman (1978), Professor, Universiti Pendidikan Sultan Idris

Lucio Vivaldi (1982), lost contact.

Maria Teresa Concepcion Lopez-Alvarez (1982) Raising a family, Mexico City.

David M. Holland (1988), Mathematical Statistician, USEPA National Research Lab

Gerardo Ignacio Hurtado Rodriguez (1993), SAS Institute

Service

Member, Technical Committee, Diversity studies, Durham and Greensboro, NC and NCDOT (State).

President (through 12/2001) and Past President, Southern Regional Council on Statistics (Regional)

Member, Departmental Review Team, Department of Statistics, Texas A&M University (National)

Chair, Departmental Review Team, Department of Sociology and Anthropology, NCSU (University)

Corporate Member (representing NCSU) and Treasurer, National Institute of Statistical Sciences (National)

Member, ASA committee, Statistics Partnership of Academe, Industry, and Government (National)

Member 1997, DMS/NSF Ad Hoc Panel to design the Vertical Integration of Research and Education (National)

Past Chair, Committee on Membership, American Statistical Association (National)

Chair, search committee for two biomathematics positions (Departmental)

Past Chair, Academic Representatives, American Statistical Association (National)

Member, Organizing Committee, 2000 BMS Math Chairs Colloquium (National)

Member, NSF panel on VIGRE grants October 2000 and 2001 (National)

Chair, Search Committee, Head of the Department of Mathematics 7-1998 to 7-2000 (College)

Coordinator, PAMS Combined Campaign, 2002 (College)

President, PAMS Faculty, current (College)

November 28, 2006