

Curriculum Vita

Kevin Robert Gehringer

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Professional Experience

September 2004 – Present

Principal and managing member of Biometrics Northwest LLC, a Washington State limited liability company providing biometrical and statistical consulting services

June 2002 – August 2004, Sole Proprietor

Consulting Biometrician

Family Forest Foundation, Chehalis, Washington: Multivariate assessment and simulation modeling for a habitat conservation plan

The Rural Technology Initiative, University of Washington, Seattle: Multivariate assessment and simulation modeling of alternate plans under the Forests and Fish Law of Washington State

September 2001 - May 2002, The Rural Technology Initiative (RTI), University of Washington, Seattle

Postdoctoral Researcher

Developed robust, multivariate, nonparametric target definition and assessment procedures

September 1998 - August 2001, The Stand Management Cooperative, University of Washington, Seattle

Ph.D. Candidate/Postdoctoral Researcher

Designed, implemented, tested, and documented a set of programs and a portable Fortran 90/95 subroutine library to create and manage a customized database for generating simulated forest stands

February 1992 - August 1996, Jet Propulsion Laboratory, Pasadena, California

Member of the Technical Staff, Navigation and Ancillary Information Facility (NAIF)

Designed, implemented, documented, tested, supported, and maintained a large, portable Fortran 77 subroutine library and set of executable programs for an information system developed to support the space science community

Summer 1990, IBM Corporation, Systems Integration Division, Houston, Texas

Summer Intern/Computer Programmer

Developed prototype client/server applications for a remote data acquisition product using the C programming language and the C socket interface to the TCP/IP communications protocol

Summer 1989, Amoco Production Company, Research Center, Tulsa, Oklahoma

Summer Intern/Computer Programmer

Developed a graphical user interface for annotating geologic well log data and extended existing software to include file conversion and the automatic generation of scripts for a geologic well log analysis system

Summer 1988, MPSI Americas, Inc., Tulsa, Oklahoma

Summer Intern/Software Analyst

Examined the numerical optimization methods of the MPSI retail market analysis system to identify potential problems and solutions. Results and recommendations were presented to the director of research and development.

Education

June 2001 Ph.D. Obtained, Forest Biometrics, forest classification, forest simulation, and growth and yield modeling

Dissertation title: "Dynamic growth and yield modeling with climate: A model for plantation Douglas-fir in the Pacific Northwest"

December 1998 – June 2001, University of Washington, Seattle, College of Forest Resources

Ph.D. Candidate, Forest Biometrics, Quantitative Resources Management Program

Research: simulation of natural and managed forests, growth and yield modeling

September 1996 – December 1998, University of Washington, Seattle, College of Forest Resources

Graduate student, Quantitative Resources Management Ph.D. Program

Cumulative G.P.A.: 3.80/4.00

September 1990 - December 1991, Rice University, Houston, Texas

Mathematical Sciences Ph.D. Program, no degree obtained

Cumulative G.P.A. 4.04/4.33

September 1989 - May 1990, Rice University, Houston, Texas

Statistics Ph.D. Program, no degree obtained

Cumulative G.P.A. 4.07/4.33

September 1987 - May 1989, The University of Tulsa, Tulsa, Oklahoma

M.S. in Applied Mathematics, Obtained May 1990

Graduate GPA: 4.000/4.000

Emphasis: Numerical analysis and numerical computing

Master's Thesis: "Nonparametric Probability Density Estimation Using Normalized B-Splines"

September 1983 - May 1987, The University of Tulsa, Tulsa, Oklahoma

B.S. in Mathematics, Computer Science Minor, Obtained May 1987

Graduated Magna Cum Laude, Cumulative GPA: 3.808/4.000

Senior Honors Thesis: "The Calculation of Pharmacokinetic Parameters through the use of Symbolic Computation and Rotational Discrimination Non-Linear Regression Analysis"

Computing and Software

Programming Languages and Software

MATLAB and R for data analysis, visualization, and statistics
 C, Fortran 77/90/95, Assembly Language, C-shell, sed, awk
 Client-server programming using TCP/IP and the C socket interface
 Portable mixed language programming (C and Fortran)
 Microsoft Office products: Word, Access, Powerpoint, Excel
 TeX and LaTeX scientific documents

Computers and operating systems

PCs under Windows 9x/NT/2000/XP, Windows, PC-DOS or MS-DOS
 Hewlett-Packard workstations under HP-UX
 Sun workstations and Sparcstations under Solaris and SunOS
 Silicon Graphics workstations under IRIX
 NeXT workstations under NeXTStep
 IBM mainframes under CMS and TSO/MVS
 DEC Micro VAX II, VAX 11/750, and VAX 11/780 under VMS
 DEC Alpha under Open VMS

Awards and Honors

University of Washington, Seattle, Washington
 Research Assistantship in the Quantitative Resources Management Ph.D. Program, College of Forest Resources.
 Member: Alpha Chapter, Xi Sigma Pi Forestry Honor Society.

Jet Propulsion Laboratory, Pasadena CA
 Certificate of Recognition for the NAIF Toolkit, National Aeronautics and Space Administration, September 19, 1997.
NASA Tech Briefs, "The SPICE System," October 1997, Vol. 21, No. 10.

Rice University; Houston, Texas
 Research Assistantship, Department of Computational and Applied Mathematic Ph.D. program
 Teaching assistantship, Department of Statistics Ph.D. Program.

The University of Tulsa; Tulsa, Oklahoma
 Teaching Assistantship, Department of Mathematics and Computer Sciences.
 Honors Scholarship, University Scholar Scholarship.
 Graduated magna cum laude, G.P.A. 3.808/4.000, May 1987.
 Member: University of Tulsa Honors Program; Phi Gamma Kappa honor society.

Professional Memberships

Society of American Foresters.

Selected Publications

Kuhn, Gary, Hanley, Donald P., Gehringer, Kevin R. (2009) "Davenport Living Snowfence Demonstration: Five-Year Update." *Northwest Science*, Vol. 83, No. 2, pp. 163-168.

Gehringer, Kevin R. (2006) "Structure-Based Nonparametric Target Definition and Assessment Procedures with an Application to Riparian Forest Management." *Forest Ecology and Management*, Vol. 223, pp. 125-138.

Kuhn, Gary, Hanley, Donald, Robinson, Dennis, Gehringer, Kevin (2005) "Living Snow Fences: Protection that keeps growing. Two year growth responses: Davenport, WA demonstration." The Association for Temperate Agroforestry Ninth North American Agroforestry Conference, June 12-15, 2005, Rochester, Minnesota.

Zobrist, K.W., K.R. Gehringer, and B.R. Lippke. (2005) A sustainable solution for riparian management. In R.L. Deal and S.M. White, editors, *Understanding key issues of sustainable wood production in the Pacific Northwest*, General Technical Report PNW-GTR-626. USDA Forest Service, Pacific Northwest Research Station, Portland, OR.

Gehringer, Kevin R. (2004b) "An Individual Tree Simulation Model for Managed Riparian Buffers." A technical report prepared for the Rural Technology Initiative, University of Washington, Box 352100, Seattle, Washington, 98195-2100 and the Family Forest Foundation, P.O. Box 1364, Chehalis Washington, 98532.

Gehringer, Kevin R. (2004a) "An Individual Tree Simulation Model for Estimating Expected Values of Potentially Available Large Woody Debris (LWD)." A technical report prepared for the Rural Technology Initiative, University of Washington, Box 352100, Seattle, Washington, 98195-2100 and the Family Forest Foundation, P.O. Box 1364, Chehalis Washington, 98532.

Zobrist, K.W., K.R. Gehringer, and B.R. Lippke. (2004) Templates for Sustainable Riparian Management on Family Forest Ownerships. *Journal of Forestry* 102(7):19-25.

Gehringer, Kevin R (2005). "A Nonparametric Method for Defining and Using Biologically Based Targets in Forest Management." In: Bevers, Michael; Barrett, Tara M., tech. comps. 2005. System analysis in forest resources: proceedings of the 2003 symposium. Gen. Tech. Rep. PNW-GTR-656. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 366 p.

Gehringer, Kevin R. (2003) "Nonparametric target definition and assessment procedures with an application to riparian forest management." A technical report prepared for the Rural Technology Initiative, University of Washington, Box 352100, Seattle, Washington, 98195-2100.

Gehring, Kevin R. (2001) *New Shoots: A tree list generation database tutorial*. A technical report prepared for The Stand Management Cooperative, College of Forest Resources, University of Washington, Seattle, WA, 98195-2100

Gehring, Kevin R. (2001) *Dynamic growth and yield modeling with climate: A model for plantation Douglas-fir in the Pacific Northwest*. Ph.D. Dissertation, College of Forest Resources, University of Washington, Seattle.

Gehring, Kevin R. and Turnblom, Eric C. (2000) *Tree list generation database user's guide and reference manual*. A technical report prepared for The Stand Management Cooperative, College of Forest Resources, University of Washington, Seattle, WA, 98195-2100.

Redner, R. A. and K. R. Gehring (1994) "Function Estimation Using Partitions of Unity." Comm. in Stat.-Theory and Methods, Vol. 23, No. 7, pp. 2059-2076.

Gehring, Kevin R and Richard A. Redner (1992) "Nonparametric Probability Density Estimation Using Normalized B-Splines." Communications in Statistics, Part B: Simulation and Computation, Vol. 21, No. 3, pp 849-878.

Gehring, Kevin R. (1990) *Nonparametric Probability Density Estimation Using Normalized B-Splines*. Master's Thesis, Department of Mathematics and Computer Science, The University of Tulsa.

Selected Presentations and Conferences

Potentially available LWD metrics for assessing riparian forest function. Society of American Foresters National Convention, October 27-31, 2010, Albuquerque, NM.

Using quantitative forest structure targets: the good, bad, and ugly. Society of American Foresters National Convention, October 27-31, 2010, Albuquerque, NM.

Seeing the trees in the forest when estimating riparian shade. Society of American Foresters National Convention, October 27-31, 2010, Albuquerque, NM.

Constructing a virtual forest: An hierarchical nearest neighbors method for generating simulated tree lists. 2006 Nearest Neighbors Workshop, August 28-30, 2006, University of Minnesota, Minneapolis, MN.

A Nonparametric Method for Defining and Using Biologically Based Targets in Forest Management. Symposium for Systems Analysis in Forest Resources 2003, October 7-9, Skamania, WA.

Dynamic Growth and Yield Modeling: An application of S-systems to Plantation Douglas-fir in the Pacific Northwest. Stand Management Cooperative Fall Meeting 2000, a joint meeting with the Virginia Tech Cooperative. Worthington Conference Center, St. Martin College, Lacey, Washington.

Constructing a virtual forest: A nearest neighbor tree list generation procedure. Invited presentation at the Tree List Generation Symposium, January 21, 2000, University of British Columbia, B.C., Canada.

An Evaluation of the Fertilization Response of the Tree and Stand Simulator (TASS). Western Mensurationsists Conference, 1998, Port Ludlow, Washington.