

# Curriculum Vitae

Jeff D. Hamann

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## Degrees

Ph.D., Forest Engineering, Spring, 2007, Oregon State University, Corvallis, Oregon  
Dissertation: High Resolution Spatial Precision Planning and Sampling  
Major Professor: Kevin Boston

M.Sc., Forest Biometrics, March, 2003, Oregon State University, Corvallis, Oregon  
Thesis: Simultaneous Equation Estimation in Young Douglas-fir Plantations

B.S., Forestry, May 1992, Humboldt State University, Arcata, California  
Forest Resources Management Option

## Research Experience

Graduate Research Assistant, Oregon State University, Forest Engineering, College of Forestry (2004-Present)

- Using spatial statistics in forestry supply chain management.
- Advanced heuristic development techniques using information theory.
- Optimizing forest planning and operations.

Research Assistant, Oregon State University, Forest Engineering, College of Forestry (2002-2003)

- *Biscuit Fire Restoration Project*. Generated inventory, growth and yield software, GIS, and remote sensing analysis for 500,000 acres.
- *Fire Risk and Small Diameter Wood Utilization Assessment for Jackson County, Oregon*. Developed GIS, inventory, and growth and yield results for 1.2 million acres.

Graduate Research Assistant, Oregon State University, Forest Resources, College of Forestry (1999-2001)

- Developed CONIFERS software growth and yield model
- Developed **systemfit**, a simultaneous equation estimation package for the R statistical package.
- Developed SYSTUM-1 Dynamic Link Library

Research Assistant, Oregon State University, Forest Resources, College of Forestry (1998)

- Developed ORGANON Dynamic Link Library and Application Programming Interface.

## Teaching Experience

Graduate Teaching Assistant, Oregon State University, Forest Resources  
Advanced Forest Economics.

Guest Lecturer, Oregon State University, Forest Resources  
Advanced Topics in GIS, Visual Basic User Interfaces and Data Structures.

## **Professional Experience**

Owner, Forest Informatics, Inc., Corvallis, Oregon (1999-present)

Senior Software Developer, USNR, Parksville, British Columbia, Canada (1997-1998)

- Designed, developed and maintained sawmill optimization software.
- Supervised junior software developers and student employees.

Software Developer, HALCO Software Systems, Vancouver, British Columbia, Canada (1995-1996)

- Developed and maintained sawmill simulation and supporting software.
- Performed sawmill production and recovery analysis.

Inventory/GIS Forester, International Paper, Longview, Washington (1995-1996)

- Managed GIS system installation and data integration.
- Developed regeneration sample processor and database program.
- Developed Database design and maintenance for new GIS.

Forestry Technician, International Paper, Longview, Washington (1994-1995)

- Performed vegetation surveys, unit layout, capital budgeting, and silvicultural treatments.
- Contract supervisor for commercial thinning program.

Software Developer, USDA Forest Service, Pacific Southwest Range and Experiment Station, Redding, California (1993-1994)

- Developed growth and yield software for regeneration model.
- Generated interfaces with other software packages.

Inventory Technician, International Paper, Reedsport, Oregon (1992-1993)

- Performed stand exams, cut-out analysis, and database management.
- Supervised seasonal employees.

## **Consulting**

Seattle Public Utilities (2005)

- Designed database to handle all data storage and processing for data collection efforts.
- Prototyped web-based software interface and procedures.
- Converted and imported legacy data files into data warehouse.

Roseburg Forest Products (2004)

- Calibrated FPS regional library for company lands.
- Developed additions to FPS software for log-stock tables using third-party software.

Interforest, LLC (2004)

- Generated ORGANON growth & yield results for regional timber supply analysis.
- Calibrated FVS growth models to FIA database.
- Developed yield generation software for FVS software.

TimberVest, LLC (2004)

- Inventory analysis for timberland acquisition.

- Spatially explicit harvest schedule development for regional inventory.

Oregon Department of Forestry, Elliott State Forest Growth and Yield (2001-2002)

- Developed inventory from legacy inventory system.
- Performed growth and yield for combinatorial optimization models.
- Developed cluster architecture for rapid generation of growth and yield results.

Umpqua Land Exchange Project, Growth and Yield Analysis (2000-2002)

- Developed inventory from a variety of third-party permanent plots.
- Developed data editing and error analysis system.

Oregon Department of Forestry, ODF Northwest Districts Growth and Yield (1999-2001)

- Growth and yield for ODF Northwest Districts Project.
- Developed inventory from unmanaged inventory system.

Spokane Tribe of Indians, Log Accounting System (2002-2003)

- Developed BIA compliant log accounting and landowner payment system.
- Integrated hand-held data recorder and real estate data into browser based system.

Oregon State University Research Forests, Log Accounting (2002-2003)

- Developed web based log accounting system.
- Integrated scale bureau data transmission into email retrieval system.

Washington Department of Natural Resources (1999)

- Verified annual allowable cut for state managed lands.
- Reviewed DFSIM implementation in harvest scheduling model.

## Publications

### Papers in Refereed Journals

- Henningson, A. and **J. Hamann**. 2007. systemfit: A Package to Estimate Simultaneous Equation Systems in R. *Journal of Statistical Software* (in press).
- M. Ritchie and **J. Hamann**. 2006. Modeling dynamics of competing vegetation in young conifer plantations of northern California and southern Oregon, USA. *Canadian Journal of Forest Research* 36(10): 2523-2532
- Ritchie, M. and **J. Hamann**. 2004. Simultaneous Growth Equation Estimation for Young, Plantation Grown Douglas-fir. *Forest Ecology and Management* (submitted).

### Papers at Refereed Conferences

- Hamann, J.** and Boston, K. 2005. Using spatial statistics to improve forest supply estimates and its implication on the performance of the primary forestry supply chain. *CABI International* (in press).

### Papers at Unrefereed Conferences

- Hamann, J.**, Boston, K. and L. Madsen 2007. Spatial sampling for Precision Production Planning. 12th Symposium for Systems Analysis in Forest Resources (in press).
- Boston, K. and **J. Hamann**. 2005. Research to improve the supply chain performance. Eds. Luiz Carlos. In *Proceedings of the 3rd Iberian American Symposium on Forest Management and Economics and 11th Symposium on Systems Analysis*, September 18-21, 2005. Ubatuba - Sao Paulo Brasil.
- Ritchie, M. and **J. Hamann**. 2005. Simulating Growth and Yield in Young Plantations of Southern Oregon: Effects of Initial Spacing. In *Managing Stand Density: The Science Behind the Art*. March 16-17, 2005. Canyonville, Oregon.

## Editorial Work

Sessions, John, Peter Bettinger, Robert Buckman, Mike Newton, and **Jeff Hamann** 2004. Hastening the Return of Complex Forests Following Fire: The Consequences of Delay, *Journal of Forestry*, April/May: Vol. 102, No. 3: 38-45.

## Reports

Sessions, J., B. Buckman, M. Newton, and **J. Hamann**. 2003. The Biscuit Fire: Management Options for Forest Regeneration, Fire and Insect Risk Reduction and Timber Salvage. College of Forestry, Oregon State University, Corvallis, Oregon. 63p.

## Software and Manuals

**Rconifers**: An R package interfacing the CONIFERS forest growth model. Forest Informatics, Inc., PO Box 1421, Corvallis, Oregon 97339-1421.

**systemfit**: An R package for linear and nonlinear simultaneous equation estimation. Forest Informatics, Inc., PO Box 1421, Corvallis, Oregon 97339-1421.

**cruisepak**: An R package for forest sample processing. Forest Informatics, Inc., PO Box 1421, Corvallis, Oregon 97339-1421.

**ORGANON**: DLL and Application Programming Interface.

## Presentations and Seminars

IUFRO (Unit 4.03.00) Sustainable forestry in theory and practice: recent advances in inventory and monitoring, statistics and modelling, information and knowledge management and policy science. University of Edinburgh, Edinburgh, UK. April 5-8th, 2005.

IUFRO (Unit 1.13.00) 5th International Conference on Forest Vegetation Management: Useable Science, Practical Outcomes & Future Needs. June 20-24, 2005. Corvallis, Oregon, USA.

Freely Available Tools for Forest Inventories. May 4-5, 2004. Wilsonville, Oregon.

Moderator: The Form and Function of GIS and Forest Management, October, 29-30, 2003. Wilsonville, Oregon.

Using Simultaneous Equations in Young Plantations: Was it worth it? Growth Model User's Group. September 11, 2003. Portland, Oregon.

Tribal Allotment and Logging Management Software Tools. BIA Timber Sale Administration Workshop. March 13, 2003. Spokane, Washington.

Common Growth Model Interface and the OpenFVS Project. Growth Model User's Group. September 27, 2001. Vancouver, Washington.

How *\*not\** to build a prescription generator, Western Mensurationst's Conference, June 25-26, 2001. Bend, Oregon.

Developing and using shared libraries in forestry software. Growth Model User's Group. January 24, 2001. Vancouver, Washington.

## Posters

Boston K. and **J. Hamann**. Improving the Primary Forest Supply Chain Through Matching Supply to Demand: An Integrated Planning Approach. International Perspectives on Forestry II. Portland, Oregon. September 12-13, 2005.

**Hamann J.** and M. Ritchie. Simulating the influence of interspecific competition in young conifer plantations. IUFRO (Unit 1.13.00) 5th International Conference on Forest Vegetation Management: Useable Science, Practical Outcomes & Future Needs. June 20-24, 2005. Corvallis, Oregon, USA.

## Work in progress

### Publications

- **Hamann, J., Boston K. and J. Sessions.** An examination of management performance metrics in timber investment management organizations.
- **Hamann, J.** An application of information theory for developing forest planning heuristics.
- Robinson, A., **Hamann, J. D.**, and R. A. Duursma. The effect of autocorrelation on the outcome of sequential sampling of Gaussian populations.

### Books

- Robinson A. and **J. Hamann.** 2008. *Forest Resource Analysis Methods using R.* Springer.

## Present Research Interests

Applications of statistical and numerical methods to forest resource analysis and optimization; forest structure metrics; design and implementation of efficient storage and retrieval methods for large forestry datasets; sampling strategies; remote sensing and image classification.

## Areas of Expertise

Forest planning, simulation and optimization, Growth and yield; econometrics; optimization; software development; geographic information systems; computing environments; computer databases and data structures.

## Software Packages and Languages

Arc/Info, ArcView, GRASS, Microsoft Office,  $\LaTeX$ ,  $\TeX$ , R/S/S-Plus, SAS, C/C++, FORTRAN, Visual Basic, Numerical Recipes, Windows NT/2000/XP, Unix, FreeBSD, Linux, MySQL, PHP, Apache, Perl, Sendmail, EViews, Python, and CVS.

References available upon request.