

Peter W. Tittmann

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Education

B.A. Environmental Studies, University of California, Santa Cruz, 1999

Advanced study: University of California Education Abroad Program in Tropical Agroecology. Costa Rica, Spring 1998

Ph.D. Geography, University of California, Davis, *expected* December 1, 2010

DISSERTATION Aerial LiDAR derived forest metrics as a basis for modeling climate impacts from forest growth, management activities, and products.

Major Professor: Debb Elliott-Fisk.

Committee: Bruce Hartsough, Susan Ustin, and Bryan Jenkins.

EXTENDED STUDY: Business Development Certificate, Graduate School of Management, University of California, Davis

Honors, Awards, & Fellowships

Dissertation fellowship, UC Davis Sustainable Transportation Research Center, (2009)

Chevron Corp. Renewable Energy Research Grant, (2008)

Graduate Research Fellowship, University of California Space Institute, (2008)

Business Integration Grant, Zell-Lurie Center for Entrepreneurship, University of Michigan, Ann Arbor, (2008)

G. Chris Anderson Award, Cleantech Venture Challenge, Leeds School of Business, University of Colorado, (2008)

Laura Perott-Mahan Graduate Fellowship, University of California, Davis (2007)

Teaching and Research Fields

Geography, Quantitative Geography, Geographic Information Sciences, Remote Sensing, LiDAR, Forest Engineering, Life-cycle analysis,

Research

Published Papers

Tittmann, P. Parker, N., Hart, Q., and Jenkins, B., "A spatially explicit techno-economic model of bioenergy and biofuels production in California," *Journal of Transport Geography*, (in press)

Tittmann, P. and Yeh, S., "A framework for assessing the environmental performance of forestry in an era of carbon management," in *Journal of Sustainable Forestry* (in press)

Parker, N., Tittmann, P., Hart, Q., and Jenkins, B., "Development of an Optimized Biofuel Supply Curve for the Western United States" *Biomass and Bioenergy* (in press)

Jenkins, B., Williams, R., Parker, N., Tittmann, P., Hart, Q., Gildart, M., Kaffka, S., Hartsough, B., and Dempster, P. (2009) "Sustainable use of California biomass resources can help meet state and national bioenergy targets", *California Agriculture* v.63 n.4

Jacobsen, J., Searcy, E., Muth, D., Wilkerson, E., Sokhansanj, S., Jenkins, B., Tittmann, P., Hart, Q., and Nelson, R., (2009) "Sustainable biomass supply systems" in proceedings *American Institute of Chemical Engineers 2009 Spring National Meeting*

Skog, K., Rummer, R., Patton-Mallory, M., Nelson, R., Jenkins, B., Parker, N., Tittmann, P., Hart, Q., Gray, E., Schmidt, A., and Gordon, G., (2008) "Strategic assessment of biofuels potential for the western U.S." in proceedings: *McWilliams, Will; Moisen, Gretchen; Czaplewski, Ray, comps. Forest Inventory and Analysis (FIA) Symposium 2008; October 21-23, 2008; Park City, UT. Proc. RMRS-P-56CD. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 13 p.*

Technical Reports

Quinn Hart, Nathan Parker, Peter Tittmann, Mui Lay, Richard Nelson, Ken Skog, Ed Gray, Alex Schroeder, and Bryan Jenkins. (2010) "Strategic development of bioenergy in the United States: spatial analysis and supply curve development'," USDA Economic Research Service

Sonia Yeh, Daniel A. Sumner, Stephen R. Kaffka, Joan M. Ogden, Bryan M. Jenkins, Hyonuk Lee, Nathan C. Parker, Peter W. Tittmann, Gouri Mishra, (May 15, 2009) "Developing a Sustainability Framework for the California Low Carbon Fuel Standard," Institute of Transportation Studies Research Report, UCD-ITS-RR-09-05

Nathan Parker, Peter Tittmann, Quinn Hart, Richard Nelson, Ken Skog, Ed Gray, Alex Schroeder, and Bryan Jenkins, (2010) "National Biorefinery Siting Model," US Department of Energy

Peter Tittmann, Nathan Parker, Joan Ogden (2008) "California Biomass Supply Potential," U.C. Davis Sustainable Transportation Energy Pathways

Peter Tittmann, Nathan Parker, Quinn Hart, Mui Lay, and Bryan Jenkins (2008) "Economic potential of California biomass resources for energy and biofuel," California Energy Commission

Nathan Parker, Peter Tittmann, Quinn Hart, Mui Lay, Joshua Cunningham, Bryan Jenkins (2008) "Western Bioenergy Assessment: Spatial Analysis and Supply Curve Development," Western Governors Association

Peter Dempster, Nicholas Gallo, Bruce Hartsough, Bryan Jenkins, Peter Tittmann, (2008) "Biomass Harvesting Equipment and Conversion Technology Review," California Biomass Collaborative

Working papers

Tittmann, P. and Shafii, S. (2010) "RANDOM SAMPLE CONSENSUS (RANSAC) as a tool for individual tree crown detection from LiDAR point cloud" *working title*

Tittmann, P. (2010) "LiDAR derived stand metrics for modeling carbon-based forest management" *working title*

Conference Presentations

Tittmann, P. Hartsough, B., Yeh, S. (2010) "Spatially explicit life-cycle analysis of forest based bioenergy in California," American Chemical Society Annual Meeting, San Francisco

Tittmann, P. (2009) "LiDAR as a tool for forest vegetation analysis," California Forest Soils Council Annual Meeting, Davis

N. Parker, Q. Hart, P. Tittmann, J. Zheng, G. Morrison, C. Murphy, R. Nelson, and B.M. Jenkins, (2009) "Large-scale bioenergy development in the U.S. – model design for optimizing biorefinery capacity and infrastructure," The 5th Sino-US Conference of Chemical Engineering, Beijing

N. Parker and P. Tittmann (2008) "Spatial modeling of biofuels production in the Western US," Association of American Geographers Annual Meeting, Boston

J.A. Greenberg, S.Z. Dobrowski, P. Tittmann, V. Vanderbilt, and S.L. Ustin (2007) "Individual tree crown recognition and remote sensing aware allometry: biomass mapping using hyperspatial remote sensing" Object Based Image Analysis Symposium, Berkeley

P. Tittmann, N. Parker, Q. Hart, B. Jenkins (2007) "Optimizing the location of biorefineries in the Western United States using Geographical Information Systems (GIS) and Linear Programming (LP)," Sun Grant Initiative: Biomass energy feedstock partnership workshop, Portland

Academic Experience

University of California, Davis

Research Assistant, School of Education Center for Community School Partnerships, 2007

Research Assistant, Biomass Harvesting Equipment/Conversion Technology Review, California Biomass Collaborative, Bruce Hartsough, 2006–2007

Research Assistant, Spatial-economic assessment of biomass potential in California, Institute for Transportation Studies, Joan Ogden, 2007–2008

Research Assistant, Western Governors' Association: Transportation Fuels for the Future Department of Biological and Agricultural Engineering, Bryan Jenkins,

Research Assistant, Spatial life cycle analysis of forest management strategies Sustainable Transportation Energy Pathways (STEPS), Sonia Yeh, 2008–2009

University of California, Berkeley

Visiting Scholar, Geospatial Innovation Facility, Maggi Kelly 2007–2008

Visiting Scholar, University of California Cooperative Extension , John Shelly 2008–2009

Professional Experience

LocusCor Geographics, Berkeley, CA
Principal 2002–present

Managed all aspects of geographic information product development and delivery.

Institute for Sustainable Forestry, Redway, CA
Forestry Project Manager 2004–2005

Led fire hazard reduction thinning crew, wrote an managed grants.

California Coastal Commission, San Francisco, CA

Coastal Program Analyst Oil Spill Program 2000–2002

Coastal Program Analysis Critical Coastal Areas Program 2003–2004

Developed a range of geospatial data products for oil spill prevention and surface water quality management.

Professional Activities

Board of Directors, University of California Students Association. 2006–2007

External Chair, Graduate Student Association, University of California, Davis. 2006–2007

Board of Directors, Humboldt County Firesafe Council. 2004–2005

Member, Society of American Foresters, 2006–Present

Member, Association of American Geographers, 2007–Present

Languages

Spanish - *fluent*

Portugese - *conversant*

Professional Training

Green Technology Entrepreneurship Academy (2008) *scholarship awardee* University of California Davis Graduate School of Management, Incline Village, California

ESRITMInstructor-led Training: Working with ArcGIS Network Analyst (2008) Portland, Oregon

ESRITMInstructor-led Training: Writing Advanced Geoprocessing Scripts Using Python (2008) Sacramento, California

Fuel Reduction on Steep Slopes, (2009) Forest Engineering Inc., Sacramento, California

Pacific Northwest Forest Harvesting Study Tour (2006), International Forest Engineering Institute, Coeur d'Alene, Idaho

Miscellaneous

Computer Skills: ArcGIS, ARCInfo, ArcIMS, Mapnik, SQL, PostGIS spatial SQL, L^AT_EX, Linux, R, ENVI, Python, Quantum GIS, Geographic Data Abstraction Library (GDAL), Extensible Markup Language (.xml), IMF Geocortex, Content Management Systems (Drupal, Joomla), Microsoft WindowsTM.

Personal

I love surfing, sailing, and whitewater kayaking. I like to ride and fix bikes, I'm a intermittent aikidōka, and when I can find shop space I enjoy woodworking.

References

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Bruce Hartsough
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