

Curriculum Vitae

Dr. Matthew R. Niblett, Ph.D.
Postdoctoral Researcher
Department of Geography
University of California at Santa Barbara
Santa Barbara, CA 93106-4060

mniblett@geog.ucsb.edu
(209) 480-0465
www.mattniblett.com

Research Interests

- Geographic Information Science and Geo-computation
- Applied spatial statistics, big-data analytics, modeling and optimization
- Human-environment interaction analysis and planning problems

EDUCATION

- Ph.D. University of California at Santa Barbara, September 2014
Geography, Emphases in Spatial Optimization & Statistics, Location Analysis, and GIS
- M.A. University of California at Santa Barbara, March 2009
Geography, Emphasis in Spatial Optimization and Location Analysis
- B.S. University of California at Santa Barbara, June 2006
Physical Geography

POSITIONS AND DATES:

- August 2015 - Present Predictive Real-Estate Analyst at Harbor Freight Tools, using real-world data in conjunction with dissertation work
- September 2014 – Present Postdoctoral researcher in the department of Geography at UCSB working with Dr. Richard Church on a forest ecology and spatial analysis project with continuing funding from the California Forest Research Association
- July 2012 – September 2014 Graduate Student Researcher working on a forest ecology spatial analysis problem funded by the California Forest Research Association
- July 2007 - June 2012 Graduate Student Researcher working on a forest fuels reduction scheduling model and software package funded by a US Forest Service research grant
- September 2006 - June 2007 Teaching Assistant

Scholarships/Grants:

- 2015-2016: National Science Foundation SBIR Phase I Grant: “Advanced Data Analytics for Public Safety” award #1549445, was Principal Investigator: \$150,000
- 2012-2014: Jack and Laura Dangermond Travel Scholarship
- 2007: UCSB Educational Improvement Grant

PUBLICATIONS as Primary Author:

1. “Characterizing Habitat Elements and Their Distribution over Several Spatial Scales: The Case of the Fisher,” (2017) with R. Church, S. Sweeney, and K. Barber. *Forests*. 8(6) pp. 1-19, “Management Strategies for Forest Ecosystem Services” Special Issue.
2. “The disruptive anti-covering location problem,” (2015) with R. Church. *European Journal of Operational Research*. 247:3, pp. 764-773.
3. “Structure of fisher (*Pekania pennanti*) habitat in a managed forest in an interior Northern California coast range”, (2015) with S. Sweeney, R. Church, and K. Barber. *Forest Science* 61:3, pp. 481-493.
4. “Modeling the Potential for Critical Habitat”, (2015) with R. Church and R. Gerrard. *Applications of Location Analysis*. Ed. H.A. Eiselt & V. Marianov. pp. 155-171, Springer-Verlag
5. “Saving the forest by reducing fire severity: selective fuels treatment and scheduling”, (2015) with R. Church, J. O’Hanley, and R. Middleton. *Applications of Location Analysis*. Ed. H.A. Eiselt & V. Marianov. pp. 173-190, Springer-Verlag
6. “The Disruptive Anti-Covering Location Problem: new modeling perspectives and solution approaches”, (2014) dissertation.
7. “Scheduling initial and maintenance fuels removal activities: A user’s guide to the mFASST Program”, (2011) with R. Church. U.S. Forest Service

In Review/Preparation:

1. “Reducing Computation Times of Anti-Covering Location Problems: A New Approach”, with R. Church
2. “Density Based Habitat Design”, with R. Church
3. “Improving Monte Carlo simulations used for analyzing landscapes”, with S. Sweeney, and R. Church.
4. “Wedging Cliques in the ACLP: Technical and Theoretical Implications”, with R. Church
5. “The Maximal Retail Hegemony Model”

CONFERENCES:

<i>Year</i>	<i>Meeting/Place</i> (* indicates Peer Reviewed)	<i>Title</i>
November, 2017	RSAI 64 th N. American Annual Meeting* Vancouver, Canada	Reducing Computation Times of Anti-Covering Location Problems: A New Approach
November, 2014	RSAI 61 st N. American Annual Meeting* Bethesda, MD	Conditional Packing
November, 2014	INFORMS 2014 Annual Meeting* San Francisco, CA	Comparing Anti-Covering Location Problem New Heuristic Solutions and Times to Optimal Ones
November, 2013	RSAI 60 th N. American Annual Meeting* Atlanta, GA	Choosing Adjacency Constraints for Anti-Cover: A New Perspective
October, 2013	INFORMS 2013 Annual Meeting* Minneapolis, MN	A GIS Scheduling System for Fuels Treatment Optimization in National Forests; A Look Under the Hood
August, 2013	SSAFR Biennial Meeting* Quebec City, QC, Canada	Home ranges, are they significant when compared to the landscape: A kernel density analysis of the fisher (<i>Martes pennanti</i>) in an industrial forest
February, 2013	WRSA Annual Meeting* Santa Barbara, CA	Structure of fisher (<i>Martes Pennanti</i>) habitat in a managed forest in an interior Northern California coast range
November, 2012	RSAI 59 th N. American Annual Meeting* Ottawa, ON, Canada	A new perspective in dispersive facility location modeling
April, 2010	AAG Annual Meeting Washington D.C.	The Marching Army Heuristic
November, 2009	RSAI 56 th N. American Annual Meeting* San Francisco, CA	The Marching Army heuristic and its application to a large-scale location problem
October, 2009	INFORMS 2009 Annual Meeting* San Diego, CA	Co-Author of Modeling Useful Habitat with the Anti-Covering Location Problem
March, 2009	AAG Annual Meeting Las Vegas, NV	Scheduling Fuels Reduction Projects Using a Spatially Based Strategy
June, 2008	ISOLDE XI* Santa Barbara, CA	Co-Editor of program and abstracts

PROFESSIONAL ORGANIZATIONS:

Member Association of American Geographers (2008-Present), Member Regional Science Association International (2009-Present), Member Institute for Operations Research and the Management Sciences (2008-Present).

UNIVERSITY SERVICE:

Years	Type of Position
2006-2013	Member of the UCSB Geography Department Computing Committee
2006-2013	Graduate student adviser for the geographic honors society Gamma Theta Upsilon, Theta Nu chapter and the Geography Club at UCSB. Advised on geographic outreach among students and community volunteer activities. Also advised individual students on academic/professional pursuits.
2008-2009	Graduate Student Representative for UCSB Geography Department meetings
2006-2008	UCSB Graduate Students Association Department Representative
2007-2008	Member of the UCSB Geography Awareness Week Committee

Guest Lectures

<i>Date and Place</i>	<i>Type of Lecture</i>
Fall 2014, University of Redlands	Invited lecture on how operations research and spatial analysis geo-computation techniques may be used in conjunction with GIS to create informed environmental policy. Applied examples were drawn from current research related to fisher and spotted owl habitat analysis, as well as a US Forest Service fire-fuels reduction project.
Fall 2013, UCSB	Several lectures for an introductory undergraduate physical geography course (Geography 3B: Land, Water, and Life). One lecture discussed geography and geographic thought and others covered physical geographic processes: earth composition, interaction of geo-systems (biosphere, lithosphere, and hydrosphere), orogenesis, and weathering.
Winter 2012, UCSB	Two lectures on spatial analysis and optimization applications used by the US Forest Service related to forest resource management based upon original research I conducted at UCSB. Given to an undergraduate audience enrolled in an introductory course on optimization methods for geographic problems (Geography 191).
Spring 2010, UCSB	Two lectures related to environmental issues and location decision making (Geography 185B) relating to fire fuels treatment scheduling to reduce fire intensity in California forests managed by the US Forest Service.

Teaching as Teaching Assistant:

Quarter	Course
Fall 2006	Geography 12: Maps and Spatial Reasoning. Instructor: Dr. Tom Pingle. I developed the labs for this course and led lab sections.
Winter 2007	Geography 110: Introduction to Meteorology. Instructor: Dr. Joel Michaelson. I led lab sections.
Spring 2007	Geography 185B: Environmental Issues and Location Decision Making. Instructor: Dr. Richard Church. I helped develop the labs for this course and led lab sections.

Software/OS/Programming Experience:

ESRI ArcGIS, OSGeo Open Source GIS software, Xpress-Mosel, CPLEX, R and R-Studio, MatLab, Microsoft Visual Studio .NET languages, Python, JavaScript, SQL, ENVI, Windows/Unix/Linux computing environments

Reviewer for:

Forest Science	International Regional Science Review
Forests	International Journal of GIS
European Journal of Operational Research	Planning Theory and Practice

References:

- Richard L. Church, Professor and Associate Dean, University of California Santa Barbara.
<http://www.geog.ucsb.edu/~forest/RLC/Index.html>
Ph. (805) 456-2832, church@geog.ucsb.edu
- Stuart H. Sweeney, Professor and Director of the Institute for Social, Behavioral, & Economic Research, University of California Santa Barbara
http://www.geog.ucsb.edu/~sweeney/Sweeney/UCSB_GEOGRAPHY.html
Ph. (805) 618-8317, sweeney@geog.ucsb.edu
- Tony H. Grubestic, Professor and Director of Center for Spatial Reasoning & Policy Analytics
College of Public Service & Community Relations, Arizona State University
<http://tonygrubestic.net/>
Ph. (602) 496-0580, grubestic@asu.edu