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Curriculum Vitae

Matthew R. Niblett, Ph.D.
Senior Spatial Analyst, Harbor Freight Tools, Calabasas, CA
Research Associate at University of California at Santa Barbara

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Research Interests

- GISc, Geo-computation, Optimization, Spatial Networks, Analytics and Big-Data
- Applied modeling and optimization, spatial statistics, and GIS
- Human-environment relations and commercial problems

EDUCATION

Ph.D.	University of California at Santa Barbara, September 2014 Geography, Emphases in GIS, Spatial Optimization & Statistics, and Location Analysis
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, cum laude

POSITIONS AND DATES:

July, 2017 - present	Senior Spatial Analyst, Harbor Freight Tools (HFT), working on several spatial problems and GIS infrastructure improvement involving SQL Server, QGIS, Power BI, Tableau, and Alteryx. **Objective: gain professional experience in GIS & Big-Data Analytics deployment across the organization**
August, 2015 – July, 2017	Predictive Real-Estate Analyst at HFT, estimating potential store performance in a fast expanding retail chain. **Objective: apply aspects of dissertation work in a commercial setting**.
April, 2015 – present	Research Associate in the Department of Geography at UCSB working with Dr. Richard Church on spatial optimization problems involving human-environment relations and commercial problems
September, 2014 – March, 2015	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, as 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. "Planning Supporting Infrastructure for an Expanding Retail Firm", with R. Church
2. "The Maximal Retail Hegemony Model" with T. Grubesic and others

3. "Addressing Risks and Uncertainty in Harvest Scheduling", with A.T. Murray, R. Wei, & R. Church
4. "Identifying significant habitat components of a territorial species", with S. Sweeney, and R. Church.
5. "Solving Anti-Covering Location Problems using an enhanced constraint set", with R. Church
6. "Density Based Habitat Design: saving the fisher by land use management", with R. Church
7. "A new Wedge and Core Cliques model for the ACLP: Technical and Theoretical Implications", with R. Church

CONFERENCES:

Year	*Meeting/Place* (* indicates Peer Reviewed)	*Title*
November, 2018	RSAI 65th N. American Annual Meeting* San Antonio, TX	Planning Supporting Infrastructure for an Expanding Retail Firm
November, 2017	RSAI 64th N. American Annual Meeting* Vancouver, Canada	Reducing Computation Times of Anti-Covering Location Problems: A New Approach
November, 2014	RSAI 61st 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 60th 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 (Martes pennanti) in an industrial forest
February, 2013	WRSA Annual Meeting* Santa Barbara, CA	Structure of fisher (Martes Pennanti) habitat in a managed forest in an interior Northern California coast range

November, 2012	RSAI 59th N. American Annual Meeting* Ottawa, ON, Canada	A new perspective in dispersive facility location modeling

PROFESSIONAL ORGANIZATIONS:

ESRI Retail Special Interest Group (Sec. June 2017-May 2018, President June 2018-Present),
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

Date and Place	***Type of Lecture***
Winter 2019, 2018, 2012, UCSB	Several guest workshops & lectures ranging from utilizing GIS analysis in R and QGIS to spatial analysis and optimization applications used by the US Forest Service related to forest resource management & private sector.
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.
Fall 2013, UCSB	Several lectures for an introductory undergraduate physical geography course (Geography 3B: Land, Water, and Life).

Teaching Assistant Experience:

Geography 12:	Maps and Spatial Reasoning. Instructor: Dr. Tom Pingle. I developed the labs for this course and led lab sections.

Geography 110:	Introduction to Meteorology. Instructor: Dr. Joel Michaelson. I led lab sections.
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 (QGIS and MapWindow), Alteryx, Power-BI & Power Query (DAX), Xpress-Mosel, CPLEX, R and R-Studio, MatLab, Microsoft Visual Studio .NET languages & VB/VBA, 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 of the Sciences Emeritus, University of California Santa Barbara.
http://www.geog.ucsb.edu/~forest/RLC/Index.html
Ph. (805) 403-1733, church@geog.ucsb.edu

Alan T. Murray, Professor of Geography, University of California Santa Barbara
http://www.geog.ucsb.edu/~amurray/
Ph. (805) 893-3663, amurray@ucsb.edu

Tony H. Grubesic, Professor and Director of Center for Spatial Reasoning & Policy Analytics
College of Public Service & Community Relations, Arizona State University
http://tonygrubesic.net/
Ph. (602) 496-0580, grubesic@asu.edu

Stuart H. Sweeney, Professor and Chair, Department of Geography; Director, Institute for Social, Behavioral, and Economic Research, University of California Santa Barbara
http://www.geog.ucsb.edu/~sweeney/Sweeney/UCSB_GEOGRAPHY.html
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