

Curriculum Vita

Robert O. Vos

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Alhambra, CA 91801

PRESENT APPOINTMENTS

Adjunct Assistant Professor (Practice) (2014-Present)
Spatial Sciences Institute
University of Southern California

Vice President of Research (2008-2014)
Clean Agency, Inc.
Sustainability Consulting, Los Angeles, California

EDUCATION

- 1992 University of Southern California
Bachelor of Arts: Study of the City (Program in the Environment and the City)
Bachelor of Music: Violoncello Performance (82 units toward completion)
Summa Cum Laude
- 1994 University of Southern California
Master of Arts in Political Science (American Politics)
Comprehensive Examination with Distinction
- 1999 Doctor of Philosophy in Political Science
Major-Field: American Politics. Sub-fields: Political Theory; Law and Public Policy.
Qualifying Examination with Distinction
- Dissertation: *Courts and Collective Action: Legal Mobilization in the U.S. Environmental Movement* (Chair, Dr. Sheldon Kamieniecki)

TEACHING INTERESTS

Environmental Studies
Spatial Science Research & Project Methods
Environmental Law, Politics, and Policy

Political Geography
Industrial Ecology
Sustainable Cities

RESEARCH INTERESTS

Sustainability Indicators
Life Cycle Assessment
Environmental Justice

Material Flow Analysis/Urban Metabolism
Water Modeling and Policy
Social Movements/Legal Mobilization

HONORS & AWARDS

2010 Disney Consumer Products, Sustainability Award for SmartPackaging Initiative
1998 Lynton Caldwell Prize for the best book published in environmental politics between 1995 and 1997. (for: *Flashpoints in Environmental Policymaking: Controversies in Achieving Sustainability*. Sheldon Kamieniecki, George A. Gonzalez, and Robert O. Vos (Co-editors). Albany: State University of New York Press, 1997)
Awarded by the Science, Technology, and Environmental Politics Section
American Political Science Association (APSA).
1996-97 Haynes Dissertation Fellowship
1995 USC Outstanding Teaching Assistant Award
Honorable Mention (second place)
1994-95 Outstanding Teaching Assistant Award
Department of Political Science
1994-95 Haynes Continuing Fellowship
1993 The Rockwell Dennis Hunt Scholarship
1993 USC Dean Joan Schaeffer Scholarship
1993 Western Governmental Research Association Graduate Student Award
1992 Phi Beta Kappa
1992 Phi Kappa Phi Undergraduate Student Research Award
1991 Phi Kappa Phi
1988 Alpha Lamda Delta

PUBLICATIONS

Book

1997 *Flashpoints in Environmental Policymaking: Controversies in Achieving Sustainability.* Sheldon Kamieniecki , George A. Gonzalez, and Robert O. Vos (Co-editors). Albany: State University of New York Press.

Peer Reviewed Journal Articles

1996 "An Archeology of Environmental Racism in Los Angeles." Laura Pulido, Steve Sidawi, Robert O. Vos. *Urban Geography* 17: 419-439.

2002 "Reforming EPA's Organizational Structure: Establishing an Adaptable Agency through Eco-Regions." Paul S. Weiland and Robert O. Vos. *Natural Resources Journal* 42: 91-131.

2007 "Defining sustainability: a conceptual orientation." Robert O. Vos. Perspective in *Journal of Chemical Technology and Biotechnology* 82: 334-339.

2010 "Papering over space and place: Product carbon footprint modeling in the global paper industry." Joshua Newell and Robert O. Vos. *Annals of the Association of American Geographers* 101 (4): 730-741.

2012 "Challenges and Opportunities for Incorporating Forest Carbon Pools in Consumer Product Carbon Footprints." Joshua Newell and Robert O. Vos. *Environmental Impact Assessment Review* 37: 23-36.

2014 "Forest Landscape Carbon Accounting in Three Regions of North America: Implications for Life Cycle Assessment of Dimensional Lumber" Joshua Newell, Donald L. Sachs, and Robert O. Vos. *Journal of Industrial Ecology* (In Review).

Book Chapters

- 1995 "The Political Effectiveness of Radical Environmentalists," Sheldon Kamieniecki, S. Dulaine Coleman, and Robert O. Vos. In Bron Taylor (editor) (pp.315-333), *Grassroots Ecological Resistance: The Global Emergence of Radical Environmental Movements*, State University of New York Press.
- 1996 "Thinking about Sustainable Development: What's Theory Got To Do With It?" Matthew Alan Cahn and Rory O'Brien (editors), *Thinking About the Environment*. M.E. Sharpe.
- 1997 "Competing Approaches to Sustainability: Dimensions of Controversy", Sheldon Kamieniecki, George A. Gonzalez, and Robert O. Vos (editors), *Flashpoints in Environmental Policymaking*. State University of New York Press.
- 2009 "Dematerialization" Robert O. Vos and Joshua Newell. Entry in the *Encyclopedia of Green Business* (Editor P. Robbins). Sage References (Green Series).

Book Reviews

- 2001 *Toward Sustainable Communities: Transition and Transformation in Environmental Policy* (Edited by Daniel A. Mazmanian and Michael E. Kraft) *Environmental Ethics* (4: 270-273).

Non-Peer Reviewed Publications

- 2014 *Strategic Sustainability Plan for Gerber Baby Foods*, with Candace Hodder, Clean Agency Consulting Report, June 1, 2014 for Nestlé Nutrition.
- 2013 *Project Springfield Life Cycle Assessment Report: Comparative Assessment of Gerber's Infant Cereal Packaging* with P. Pereira and C. Hodder, Clean Agency Consulting Report, March 29, 2013 (third-party reviewed for ISO 14040/14044 conformity)
- 2013 *Project Columbia Life Cycle Assessment Report: Comparative Assessment of Gerber's Infant Purée Packaging* with P. Pereira and C. Hodder, Clean Agency Consulting Report, March 29, 2013
- 2012 *Carbon Footprinting for Products: What Companies Should Know*, Environmental Leader, July 11, 2012
- 2011 *Nine Tips for Bringing Sustainability to the Supply Chain*, with C. Hodder, GreenBiz, October 25, 2011
- 2011 *Corporate Water-Energy Footprint: Critical Work for Risk Management*, Environmental Leader, May 19, 2011
- 2011 *Life Cycle Environmental Impact Assessment of Toy Packaging at Mattel, Inc.* with C. Del Maestro and C. Hodder, Clean Agency Consulting Report, January 2011

- 2011 *Assessing Ecosystem Values of Watersheds in Southern California* with M. Antos, Los Angeles and San Gabriel River Watershed Council Report, February 2011
- 2010 *Screening Life Cycle Assessment of Dreyer's/Haagen-Dazs Ice Cream* with C. Del Maestro and C. Hodder, Clean Agency Consulting Report, June 2010 (third-party reviewed for ISO 14040/14044 conformity)
- 2009 *A Comparative Analysis of Carbon Dioxide Emissions in Coated Paper Production: Key Differences between China and the U.S.* Robert O. Vos and Josh Newell, USC Center for Sustainable Cities Report. June 2009.
- 2009 *Orange County Green Initiatives Strategic Tactics Plan.* Robert O. Vos, Report for the Orange County Workforce Investment Board (OCWIB). May 2009.
- 2008 *Environmental Analysis of Coated Paper Supply Chains: the United States and China.* Josh Newell and Robert O. Vos, USC Center for Sustainable Cities, White Paper (May).
- 2003 Post-Symposium Report. NSF Symposium on Sustainable Industrial Development: Energy and Material Exchange and Optimization through Eco-Industrial Networks (<http://www.usc.edu/schools/sppd/research/NCEID/>).
- 2002 *Resource Manual on Infrastructure for Eco-Industrial Parks.* Ian T. Penn and Robert O. Vos. (<http://www.usc.edu/schools/sppd/research/NCEID/Infrastructure.pdf>).
- 2002 *Resource Manual on Eco-Industrial Approaches to Brownfield Remediation.* Ian T. Penn and Robert O. Vos (<http://www.usc.edu/schools/sppd/research/NCEID/>).
- 1997 *Clean Air Goal Visible in Haze.* Saturday Commentary (Op-Ed). Los Angeles Daily News (July 12).

TEACHING EXPERIENCE

Graduate Courses:

Sustainable Cities, USC Department of Geography and School of Policy Planning and Development (GEOG/PLUS 601 and PPDE 632) (2006-2014)

Industrial Ecology: Technology-Environment Interaction, USC Epstein Department of Industrial and Systems Engineering (ISE 576) Co-developed and taught with Professor Mansour Rahimi (2009-2015) (Distance Education Network Course)

Master's Thesis Project Preparation (On-line Course), USC Geographic Information Science and Technology Program (GIST) (GEOG 594a and SSCI 594a) Co-developed and taught with Professors Karen Kemp, Jordan Hastings, and Daniel Warshawsky (2011-2015)

Geospatial Technology Project Management (On-line Course), USC Geographic Information Science and Technology Program (GIST) (SSCI 585) (Fall 2014)

Introduction to Environmental Studies, USC Environmental Studies Program (ENST 500) (2001-2003)

Undergraduate Courses:

Environmental Law, USC Department of Political Science (POSC 391) (1999 & 2005)

Environmental Risk Assessment, USC Environmental Studies Program (ENST 441)
Developed and co-taught with Biology Professor Anthony Michaels, Wrigley Institute of Environmental Studies, Catalina Island Semester (2000 & 2001)

American Political Thought and Practice, University of Redlands (Gov. 318) (1999)

Undergraduate Courses (as teaching assistant, 1992-94):

Theory and Practice of American Democracy, USC Department of Political Science (POSC 100)

American Political Thought, USC Department of Political Science (POSC 365)

Cultural Diversity and the Law, USC Department of Political Science (POSC 441)

Politics and Culture, USC Department of Political Science (POSC 465)

RESEARCH FUNDING

- 2008 Principal Investigator
“Chinese Coated Paper Supply Chain Analysis”
Sub-Contract with Clean Agency for NewPage Corporation, Co-PI Josh Newell (\$56,665)
- 2007 Co-Principal Investigator
“Ecosystem Values of Watersheds in Southern California.” State of California, Department
Water Resources. (\$391,934). N. Steele, P.I., Los Angeles and San Gabriel Rivers
Watershed Council.
- 2007 Consultant
Estimation of carbon footprint for an LA-based furniture manufacturing company. Clean
Agency, Inc. of Pasadena, CA. (\$5,000). R. Vos, P.I.
- 2006 USC Future Fuels and Energy Initiative Faculty Fellow
“Building USC Research Capacity for Environmental Life-Cycle Assessment of Future
Fuels and Energy Systems.” (\$25,000) M. Rahimi, P.I.
- 2003 Consultant
Sustainability Indicators for the Integrated Resource Plan (IRP). City of Los Angeles,
Bureau of Sanitation. (\$65,000). J. Devinny, P.I.
- 2002 Project Coordinator
“Modeling Eco-Industrial Symbiosis: Greening of Regional Industrial Materials Networks”.
National Science Foundation, Crosscutting Program under the Bio-Complexity Initiative:
Materials Use Science Engineering and Society (MUSES). (\$100,000). M. Rahimi, P.I.
- 2002 Urban Initiative Faculty Fellow
“Modeling the Los Angeles Industrial Ecosystem.” USC Urban Initiative Faculty Grant
(\$25,000) M. Rahimi. P.I. and J. Wolch and J. Devinny, Co-P.I.’s
- 2002 Research Associate
“Toward a More Sustainable Los Angeles: a Workshop for General Managers and Division
Mangers at the City of Los Angeles.” (\$6,500). J. Wolch, P.I. Responsible for coordinating
the LEED/Green Building portion for a full-day workshop.
- 2002 Research Associate
“Sustainability Starts at Home.” Contract for the Southern California Gas Company,
Diverse Markets Outreach Program (\$99,975). J. Wolch, P.I.
- 1999 Principal Investigator
“Exploring Local Governance and Sustainability: the Solid Waste Problem in Los Angeles.”
Haynes Foundation, Grants to Develop Research Designs for a More Sustainable Los
Angeles (\$5,000).

RESEARCH SUPERVISIONS

Student Research Projects

- 2000 “Eco-Industrial Parks in the City: an Implementation Study in Central Los Angeles.” Sustainable Cities Program, Summer Undergraduate Fellows Project Report.). Michael Besem and Charles Cange. Supervised with Najmedin Meshkati, Civil and Environmental Engineering.
- 2001 “Worldwide Water Quality Assessment: a Comparative Study of 10 Major Coastal Cities.” Sustainable Cities Program, Summer Undergraduate Fellows Project Report. Katie Bollie, Peter Nelson, and Jennie Walcek. Supervised with Jeffrey Sellers, Political Science and Jed Fuhrman, Biology.
- 2001 “Exploring Alternative Environmental Assessments: a Case Study of the Alameda Corridor of Central Los Angeles.” Sustainable Cities Program, Summer Undergraduate Fellows Project Report. Oliver Baker, Carina Cuellar, and David Sumi. Supervised with Mansour Rahimi, Industrial and Systems Engineering.
- 2001 “Best Practices in Sustainable Urban Redevelopment of Shopping Centers” (University Village Series White Paper No. 1). Summer Undergraduate Fellows Project Report. Dawn Alley, Carmen Cejudo, and David Milam. Supervised with Jennifer Wolch, Geography and Joseph Devinny, Civil and Environmental Engineering.
- 2001 “Toward a Sustainable University Village” (University Village Series: White Paper No. 2). Summer Undergraduate Fellows Project Report. Dawn Alley, Carmen Cejudo, and David Milam. Supervised with Jennifer Wolch, Geography; Joseph Devinny, Civil and Environmental Engineering; and Travis Longcore, Geography.
- 2001 “Application of Life Cycle Assessment to Environmental Impact Assessment: a Case Study of the Alameda Corridor Project of Central Los Angeles.” Sustainable Cities Program Ph.D. Collaborative Project of Merrill Weidner. Supervised with Mansour Rahimi, Industrial and Systems Engineering.
- 2002 “Economic Aspects in Implementing the Concept of Industrial Ecology: the Use of Regional Input-Output Modeling” Sustainable Cities Program Ph.D. Collaborative Project of Kitty Kay Chan. Supervised with Professor Jeffrey Nugent, Economics.
- 2002 “Economic Input-Output Analysis as a Tool for Urban Sustainability.” Summer Undergraduate Fellows Project Report. Adam Brandt, Jacqueline Doremus, and Fan Lau. Supervised with David Rigby, UCLA Geography and Mansour Rahimi, Industrial and Systems Engineering.
- 2002 “Environmental Justice Assessment of the Alameda Corridor of Central Los Angeles”. Sustainable Cities Program Ph.D. Collaborative Project of Sheila Ruth Akineley. Supervised with Laura Pulido, Geography.

Master's Theses

- 2002 “Economic Valuation of Impacts to Beneficial Uses to Water Quality in California: a Proposed Methodology” USC Masters Thesis for the Degree M.A. of Environmental Studies of Rafael Maetsu. Committee Chair, supervised with Douglas Capone, Biology and Linwood Pendleton, Economics.
- 2003 “Coastal Wetlands Mitigation Policy: Moving from Loss to No Net Less of Water Quality Functions” USC Masters Thesis for the Degree M.A. of Environmental Studies of Stephanie Gasca. Committee Chair, supervised with Joseph Devinnny, Civil and Environmental Engineering, Roderick Mckenzie, Geography, and Suzanne Edmands, Biology.
- 2004 “Evaluating NGO Success in Conservation Efforts in the Brazilian Amazon” USC Masters Thesis for the Degree M.A. of Environmental Studies of Hallie Gardner. Committee Chair, supervised with Albert Herrera, Biology and Dean Jane Cody.
- 2011 “Different Geographical Representations of Middle America” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Kevin Kelly. Committee Member. Supervised with John Wilson (Chair) and Karen Kemp (Member), Spatial Sciences Institute.
- 2012 “The Role of GIS in Asset Management: Integration at the Otay Water District” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Alexander J. Schultz. Committee Chair, supervised with John Wilson, Geography and Sociology and Karen Kemp, Spatial Sciences Institute.
- 2012 “Community Gardens for Social Capital: A Site Suitability Analysis in Akron, Ohio” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Allison Oulton. Committee Chair, supervised with Kirk Oda and Darren Ruddell, Spatial Sciences Institute.
- 2012 “Investigating Bus Route Walkability: Comparative Case Study in Orange County, California” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Stephanie Chen. Committee Chair, supervised with Kirk Oda and Darren Ruddell, Spatial Sciences Institute.
- 2012 “Spatial Analysis of Urban Built Environments and Vehicle Transit Behavior” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Daniel Currie Eisman. Committee Chair, supervised with Kirk Oda and Dan Warshawsky, Spatial Sciences Institute.

- 2012 “Improving the Communication of Water Allocation Decisions Using Interactive Maps” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Andrew L. Stickney. Committee Chair, supervised with Jennifer Swift and Darren Ruddell, Spatial Sciences Institute.
- 2012 “Is the Likelihood of Waterfowl Presence Greater on Conserved Lands?” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Brian Vance Kearns. Committee Member. Supervised with John Wilson (Chair) and Karen Kemp (Member), Spatial Sciences Institute.
- 2013 “Water Rights Permit System (WRPS): a GIS-Based Tool for the Umpqua Drainage Basin” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Kathy Thompson. Committee Chair, supervised with Jennifer Swift and Daniel Warshawsky, Spatial Sciences Institute.
- 2013 “Closed Landfills to Solar Energy Power Plants: Estimating the Solar Potential of Closed Landfills in California” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Devon R. Munsell. Committee Chair, supervised with Jennifer Swift and Darren Ruddell, Spatial Sciences Institute.
- 2013 “Explorations of American Churchscape Diversity” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Amanda Alamo. Committee Chair, supervised with John Wilson and Daniel Warshawsky, Spatial Sciences Institute.
- 2013 “Wrong Way Driving in San Antonio, Texas: A Transportation Route Study Using Network Analyst” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Raymond Dominic Maldonado. Committee Member. Supervised with Jennifer Swift (Chair) and Darren Ruddell (Member), Spatial Sciences Institute.
- 2014 “The Geography of Voter Power in the U.S. Electoral College from 1900-2012” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Luke Wenschhof. Committee Chair, supervised with Karen Kemp and Daniel Warshawsky, Spatial Sciences Institute.
- 2014 “Evaluating Transit and Driving in Disaggregated Commutes through GTFS in ArcGIS” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Frederico Tallis. Committee Member. Supervised with Karen Kemp (Chair), Spatial Sciences Institute and Maged Dessouky (Member), Industrial and Systems Engineering.
- 2014 “Spatiotemporal Visualization and Analysis as a Policy Support Tool: a Case Study of the Economic Geography of Tobacco Farming in the Philippines” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Steven Rubinyi. Committee Member. Supervised with Karen Kemp (Chair) and Daniel Warshawsky, Spatial Sciences Institute.

- 2014 “Mapping Firing Ranges as Social Capital Generators in Houston, Texas” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Jennifer Johnson. Committee Member. Supervised with John Wilson (Chair) and Daniel Warshawsky, Spatial Sciences Institute.
- 2014 “A Site Suitability Analysis for an Inland Port to Service the Ports of Los Angeles and Long Beach” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Emily Frazier. Committee Chair, supervised with Katsuhiko Oda (Spatial Sciences Institute) and Mansour Rahimi (Industrial and Systems Engineering).
- 2014 “Evaluating Spatial Changes in the Rate of Insurgency-Violence in Central Africa: the Lord’s Resistance Army 2008-2012” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Robert Franssen. Committee Member. Supervised with Daniel Warshawsky (Chair) and Flora Paganelli, Spatial Sciences Institute.
- 2014 “Using Pattern Oriented Modeling to Design and Validate Spatial Models: A Case Study in Agent-Based Modeling” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Jerry Corum. Committee Member. Supervised with Karen Kemp (Chair), Spatial Sciences Institute and Thomas Garrison (Member), Anthropology.
- 2014 “Investigating Electoral College Reform: Geography’s Impact on Elections, and How Maps Influence Our Perception of Election Outcomes” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Meagan Calahan. Committee Member. Supervised with Karen Kemp (Chair) and Daniel Warshawsky, Spatial Sciences Institute.
- 2014 “Identifying and Locating the Need for Financial Education” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of David Breeding. Committee Member. Supervised with Katsuhiko Oda (Chair) and Daniel Warshawsky, Spatial Sciences Institute.
- 2014 “Development of Web GIS or Urban Sustainability Indicators of Oakland, California” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Gina Kiani. Committee Chair, supervised with Jennifer Swift and Daniel Warshawsky, Spatial Sciences Institute.
- 2014 “Semi-Automated Visualization of Spatial Information in Unstructured Text” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Sarah Gehring. Committee Member. Supervised with Yao-Yi Chiang (Chair) and Jennifer Swift, Spatial Sciences Institute.
- 2014 “Modeling Open Space Acquisition” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Kathryn Metivier. Committee Member. Supervised with Yao-Yi Chiang (Chair) and Travis Longcore, Spatial Sciences Institute.

- 2014 “Radio Frequency Identification Queuing & Geo-Location (RAQGEO): a Spatial Solution to Asset and Inventory Management at Williams Scotsman, Inc.” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Bradley Griffiths. Committee Member. Supervised with Darren Ruddell (Chair) and Yao-Yi Chiang, Spatial Sciences Institute.
- 2014 “Generating Bicyclist Counts Through a Mashup Mobile and Web Application Utilizing Volunteered and Professional Geographic Information.” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Patricia Jula. Committee Member. Supervised with Yao-Yi Chiang (Chair) and Darren Ruddell, Spatial Sciences Institute.
- 2014 “Smart Grid Site Suitability” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Chad Johnson. Committee Member. Supervised with John Wilson (Chair) and Katsuhiko Oda, Spatial Sciences Institute.
- 2014 “Historical Temperature Trends in Los Angeles County, California” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Dustin Reed. Committee Member. Supervised with Su Jin Lee (Chair) and Darren Ruddell, Spatial Sciences Institute.
- 2015 “Mapping Uniformity of Park Access Using Cadastral Data within Network Analyst in Wake County, NC” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Jonathan Parsons. Committee Chair, supervised with Yao-Yi Chiang and Daniel Warshawsky, Spatial Sciences Institute.
- 2015 “Smart Growth and Walkability Affect on Vehicle Use and Ownership” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Derek Newland. Committee Chair, supervised with Su Jin Lee, Spatial Sciences Institute and Meredith Franklin, Preventive Medicine/ Spatial Sciences Institute.
- 2015 “Hidden Hazards in Harbor Gateway: Exploring a Web GIS Solution for Superfund Education and Environmental Justice” USC Thesis for the Degree M.S. of Geographic Information Science and Technology (GIST) of Mallory Graves. Committee Chair, supervised with Daniel Warshawsky and Jennifer Swift, Spatial Sciences Institute.

Ph.D. Dissertations

- 2005 “Green Logistics for Regional Industrial Waste Materials and By-Products” USC Ph.D. Dissertation of Hamid Pourmohammadi, Industrial and Systems Engineering, Outside Member. Supervised with Mansour Rahimi (Chair), Maged Dessouky (Member), Jim Moore (Member), Industrial and Systems Engineering.
- 2014 “Defining the Geospatial Needs of an Ubiquitous Disaster Relief Organization” USC Ph.D. Dissertation of Evan Lue, Geography. Supervised with John Wilson (Chair) and Meredith Franklin (Member), Spatial Sciences Institute

CONFERENCE PAPERS & INVITED LECTURES

- 2015 “Hierarchical Spatial Modeling for Smart Growth” Paper presentation to the Association of American Geographers 2015 Conference, Chicago, Illinois April 21-25.
- 2014 “Sustainability Challenges of Flexible Plastic Packaging” Invited Lecture at Global Pouch West: Flexible is the Future. Packaging Strategies Group, Garden Grove, CA. December 3.
- 2014 “Teaching Sustainability with Geospatial Technologies” Invited Lecture for International Forum for UNESCO’s World Teacher’s Day. Association of World Citizens, Los Angeles, CA. October 5.
- 2012 “Strategic Sustainability Plan for the Port of Los Angeles” Invited Lecture for Sustainability Planning Workshop, October 11.
- 2012 “Business Value of Life Cycle Assessment Webinar” with EarthShift (PRÉ Int’l), May 17.
- 2011 “Geographical Delimitation for Carbon Footprint Modeling in the Global Paper Industry” Paper presentation to the International Society for Industrial Ecology 2011 Conference, Berkeley, California June 7-10.
- 2011 “Assessing Impacts of Food Packaging” Invited Lecture for Sustainable Packaging LCA Symposium, American Institute of Chemical Engineers, Chicago, IL, March 25.
- 2010 “Watershed Health Indicators of Urban Sustainability” CleanTech 2010, Anaheim, California, June 23.
- 2009 “Green Initiatives Strategic Tactics Plan” Invited Lecture for the Orange County Workforce Investment Board, July 10.
- 2009 “Environmental Justice Research Agenda for Cap and Trade under AB 32” Cities and Climate Change: a Solutions Oriented Conference, USC, Los Angeles, April 30.
- 2008 “Technologies and the Profitability of Waste-to-Energy: Can we achieve zero waste?”

- California Clean Innovation: Driving Technology, Business and Policy Innovation, UCLA, Los Angeles, May 9.
- 2008 “Achieving Sustainable Development in Southern California: Collaborative Learning through Systems Dynamics Modeling” INCOSE Annual Conference: Systems Engineering for the Planet, the Netherlands, June 15-19.
- 2007 “Industrial Ecology in the Sustainable City” Sustainable Cities Roundtable, French Consulate, Los Angeles, September 28.
- 2005 Session 9: Water Reuse and Reclamation Technologies, “Sustainability Indicators for the City of Los Angeles Department of Public Works Integrated Resource Plan,” Water Environment Federation, 2nd Joint Conference for the Sustainable Management of Water Quality Systems, San Francisco, August 28-31
- 2005 Sustainable Cities and Regional Metabolism, “Cluster analysis technique for regional materials flows and urban sustainability,” Paper presentation to the International Society for Industrial Ecology 2005 Conference, Stockholm, Sweden, June, 12-15.
- 2003 Closing Session Moderator for the NSF Symposium on Sustainable Industrial Development: Energy and Material Exchange and Optimization through Eco-Industrial Networks (November 6 & 7).
- 2003 Operations Research Panel, “Greening of industrial materials networks in Los Angeles County: Reverse logistics model development,” Annual Industrial Engineering Research Conference, Portland, Oregon, May 17-21.
- 2002 Southern California Air Quality Management District “Growth in the Los Angeles Logistics Industry and the Challenge for Clean Air” October.
- 2000 The University of Michigan (Ann Arbor), School of Natural Resources and the Environment. “Multidisciplinary Research in Urban Sustainability.” October.
- 1999 Southern California Research Group for Environmental Politics and Policy, “Greening VIII”, “Courts and Collective Action: a Quantitative Analysis of Legal Mobilization in the Environmental Movement”, University of Southern California, January 30.
- 1995 Environment Panel, "Stigma and Place: Bringing Context to Theories of Environmental Discrimination", American Association of Geographers, Chicago, March 14-17.
- 1995 Southern California Research Group for Environmental Policy, "Greening III", "A Case Study of Environmental Discrimination: Toxic Air Pollution in the Los Angeles Metropolitan Region", University of Southern California, January 28.

- 1994 Los Angeles: Past, Present, and Future Panel, "The Paradox of Managed Growth: Environmental Politics in Los Angeles", Western Political Science Association, Albuquerque, March.
- 1994 Environmental Justice Panel, "Stigma and Place: Toward a Theory of Environmental Racism", Western Political Science Association, Albuquerque, March.
- 1994 Southern California Research Group for Environmental Policy, "Greening II", "The Supreme Court and Environmental Standing: A Facade of Statecraft", Claremont Graduate School, January.
- 1992 Environmental Policy Panel, "Designing a Sustainable Bureaucracy: Making the EPA Adaptable", Western Political Science Association, San Francisco, March.

PROFESSIONAL SERVICE

- 2014 Workshop and Conference Participant. "Sustainability Learning Communities Network: From Information to Evidence about Sustainability Practices" UCGIS 2014 Symposium, Pasadena, CA (May)
- 2011 Co-organizer and roundtable participant. "California Sustainability Indicators Symposium," USC Davidson Conference Center, Los Angeles, CA (February).
- 2010 Discussant for Visiting UCLA Professor J. Evans. "Resilience, ecology, and adaptation in the experimental city," Los Angeles and San Gabriel Rivers Watershed Colloquium, MWD Headquarters, Los Angeles (November).
- 2001 Paper Presentation to Sustainable Cities Program Research Seminar. "Applying Life Cycle Assessment and Environmental Justice Analysis to Environmental Impact Assessment for the Alameda Corridor Project." With Merrill Weidner. Los Angeles, CA (October).
- 1999 Paper Presentation to the New Research Designs for a More Sustainable Los Angeles Conference. "Exploring Local Governance and Sustainability: the Solid Waste Problem in Los Angeles." Los Angeles (September).
- 1998 Secretary to the APSA Workshop on Sustainable Development (with Margaret Scully Granzeier). American Political Science Association, Boston, MA (September).
- 1993 Discussant. "Local Politics and the Environment Panel," Western Political Science Association, Pasadena, CA (March).
- 1992 Discussant. "Federalism and Intergovernmental Relations Panel," Western Political Science Association, San Francisco, CA (March).

Peer Review (Journal Referee)

- 2004 Urban Studies: An International Journal for Research in Urban and Regional Studies.
2005 Annals of the American Association of Geographers
2012 International Journal of Sustainable Transportation

PRIOR APPOINTMENTS & PROFESSIONAL EXPERIENCE

- 2010-2014 *Adjunct Assistant Professor (Research) and Lecturer*
University of Southern California
Spatial Sciences Institute
Responsible for co-development and ongoing management of an introductory course for the thesis component of the M.S. degree in Geographic Information Science and Technology (GIST).
- 2003-2010 *Research Assistant Professor of Geography*
University of Southern California
Department of Geography and Center for Sustainable Cities
Responsible for coordinating industrial ecology research and managing the summer undergraduate fellowship program. Activities included advising multi-disciplinary student collaborative projects, seeking external funding with multi-disciplinary faculty teams, and conducting research with these teams.
- 2006-2008 *Sustainable Enterprise Executive Roundtable (SEER), Faculty Team Member*
University of Southern California
Center for Sustainable Cities
Responsible for design, concept and coordination for regional sustainability projects for participating firms, including Disney, Mattel, Port of LA, YTI/NYK (Ocean Carriers), Volvo, CDM, and Waste Management International.
- 2005 *Project Manager for "Meeting the Sustainability Challenge: Executive Education"*
University of Southern California
Center for Sustainable Cities
Responsible for designing the curriculum and instructional materials, recruiting the faculty for the program, and coordinating for marketing and logistics.
- 2000-02 *Post-Doctoral Research Associate*
University of Southern California
Center for Sustainable Cities/Sustainable Cities Program
- 1998-99 *Haynes Foundation Fellow*
Town Hall Los Angeles (a public policy forum)
Duties included administering a curriculum enrichment program for high school students, editing the Town Hall Journal, and producing a weekly radio program.

- 1994-95 *Research Associate*
University of Southern California
Department of Geography
Researcher on National Science Foundation Project, "The Role of Race and Class in Exposure to Environmental Hazards." L. Pulido, PI.
- 1992 *Student Professional Worker*
The City of Los Angeles
Integrated Solid Waste Management Office; duties included researching and writing policy for the implementation of California's state recycling legislation (A.B. 939).
- 1989-92 *Governing Board Member, USC Norman Topping Student Aid Fund*

PATENTS

U.S. Patent Application Pending. May 2012. "Smart Packaging Initiative Scoring System." Co-Inventor with Mazzoc, L. and Del Maestro, C. Docket No.: 0260345. Assignee: Disney Enterprises, Inc.

MEDIA

- 1993 Guest Appearance on KPFK radio, 90.7 FM Los Angeles; "Science and the Citizen" call-in program; interviewed about the influence of the incoming Clinton Administration on policymaking at the U.S. EPA, October.
- 2002 Interview on German Public Radio. Comments on the Bush Administration's EPA Global Climate Change Report, June.
- 2003 Interview on Swedish Public Radio. Comments on the appointment of Mike Leavitt as the Administrator of the Environmental Protection Agency.

OUTSIDE INTERESTS

Concert Cellist

Past performing highlights include:

- Second Prize, American String Teachers Association, National Solo Competition (1994)
- Member of the New World Symphony with Michael Tilson Thomas (music director)
- Participation in leading summer music festivals and international tours

Currently performing as section cellist with the Pacific Symphony, the third largest orchestra in California, based at the Segerstrom Center for the Performing Arts in Orange County, CA.

Training and experience in private cello teaching

Hiking and nature photography