

STEPHEN J. WALSH

Lyle V. Jones Distinguished Professor
Department of Geography
Director, UNC Center for Galapagos Studies
Co-Director, UNC-USFQ Galapagos Science Center, San Cristobal Island, Ecuador
Fellow, Carolina Population Center
Member, Curriculum for the Environment & Ecology
Adjunct Professor, Universidad San Francisco de Quito, Ecuador
Adjunct Professor, University of the Sunshine Coast, Queensland, Australia
Fellow, American Association for the Advancement of Science
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March 2019

BIO-SKETCH

Lyle V. Jones Distinguished Professor; Professor of Geography; Director, Center for Galapagos Studies; Co-Director, Galapagos Science Center, San Cristobal Island, Galapagos Archipelago, Ecuador; Member, Curriculum for the Environment & Ecology; Research Fellow, Carolina Population Center, University of North Carolina at Chapel Hill; Adjunct Professor, Universidad San Francisco de Quito, Ecuador and the University of the Sunshine Coast, Queensland, Australia.

Developed and leads the Galapagos Initiative at the University of North Carolina at Chapel Hill, in association with the Universidad San Francisco de Quito; Dedicated (May 2011) the Galapagos Science Center, San Cristobal Island, Galapagos Archipelago, Ecuador – a facility for research, education, and community outreach and engagement programs in the Galapagos Islands; Galapagos Science Center is approximately 20,000 square feet in size and contains a Microbiology & Genetics Lab, Terrestrial Ecology Lab, Marine Ecology Lab, and Spatial Analysis & Modeling Lab, in addition to faculty, staff, and student offices, conference room, community classroom, and equipment storage and outside terrace space for field experiments and teaching opportunities.

Through an extensive and intensive program of integrated and interdisciplinary research, the primary goals of the Galapagos Initiative are to understand the complex nature of population-environment interactions, challenges related to resource conservation and economic development, global interconnections, science, education, and knowledge transfer programs that benefit UNC-Chapel Hill, our collaborators, and the global community, inform policy and management through investigative and integrative science, develop and translate research technologies to industry and government, and develop insights and understandings to address the cross-cutting challenges that face science, society, and the Galapagos Islands. In addition, the Galapagos Initiative will create a global template for the study of other conflicted and challenged places around the globe that are located in and around protected areas as well as in the many diverse environments where social and ecological sustainability is at risk. The primary question that guides the Galapagos Initiative is *“What are the interconnections within the coupled human-natural system in the Galapagos Islands, and how do they affect the social and ecological vulnerability & sustainability of this World Heritage Site?”*

Fulbright Scholar (2011-2015), Council for International Exchange of Scholars, Specialists Program – Accepted an invitation to the University of the Sunshine Coast, Queensland, Australia (2012),

lectures presented at University of the Sunshine Coast, Griffith University, and Queensland University of Technology; Participated in “Workshop on Climate Change, Social-Ecological Dynamics, and Tourism in Iconic Protected Areas.”

Invited Speaker, Arthur M. Sackler Colloquia of the National Academy of Sciences on “Coupled Human and Environmental Systems,” Washington, DC (2016), invited author, Proceedings of the National Academy of Sciences (see below):

Walsh, S.J. and Mena, C.F. (2016). Interactions of social, terrestrial, and marine sub-systems in the Galapagos Islands, Ecuador. Sackler Colloquium on Coupled Human and Environmental Systems (Social Sciences, Environmental Sciences, Sustainability Science), *Proceedings of the National Academy of Sciences* 113(51): 14536-14543.

Invited Project Scientist, Chinese Academy of Sciences, Institute for Geographic Sciences and Natural Resources Research (IGSNRR) (2012-2013); Distinguished Teaching Award for Post-Baccalaureate Instruction, University of North Carolina at Chapel Hill (2008); Awarded Honors for Lifetime Achievement, Southeastern Division of the Association of American Geographers (2007); Elected Fellow, American Association for the Advancement of Science (2006); Edward J. Taaffe Distinguished Lecturer, Department of Geography, Ohio State University (2004); Ida Beam Distinguished Visiting Professor, Department of Geography, University of Iowa (2002); Elected President (2003-2005), Vice-President (2000-2002), and Secretary (1992-1994), Southeastern Division of the Association of American Geographers; Awarded National Research Honors for Distinguished Scholarship, Association of American Geographers (2001); Awarded Research Honors, Southeastern Division of the Association of American Geographers (1999); Awarded Outstanding Contributions Award and Medal from the Remote Sensing Specialty Group of the Association of American Geographers (1997); Named the *Amos H. Hawley* Professor at the University of North Carolina at Chapel Hill (1993-96); Served as Director, Spatial Analysis Unit, Carolina Population Center (1992-97), and faculty advisor to the Spatial Analysis Unit (2000-present); Elected Chair of the Geographic Information Systems (1998-2000) and Remote Sensing (1994-1996) Specialty Groups of the Association of American Geographers.

Served on the Editorial Boards of the *Annals of the Association of American Geographers*, *GeoCarto International*, *Plant Ecology*, *Journal of Geography*, *The Professional Geographer* & *Southeastern Geographer*; Served on the Dissertation Improvement Panel for the Geography and Regional Science Division of the National Science Foundation (1997-1999); Member of Review Panels, National Institutes of Health (2001, 2005); Member, Committee of Visitors, National Science Foundation (2003).

Launched a Book Series on the Galapagos Islands, with Springer Science and Business Media, Series Editors (S.J. Walsh & C.F. Mena), “*Social, Terrestrial, and Marine Interactions in the Galapagos Islands*,” (2012); “*Science and Conservation in the Galapagos Islands: Frameworks & Perspectives*,” (2013), (S.J. Walsh & C.F. Mena, Guest Editors); “*Evolution from the Galapagos: Two Centuries after Darwin*,” (2013), (G. Trueba & C. Montufar, Guest Editors); “*The Galapagos Marine Reserve: a Dynamic Social-Ecological System*,” (2014) (J. Denkinger & L. Vinueza, Guest Editors); “*Darwin, Darwinism and Conservation in the Galapagos Islands*,” (2017) (D. Quiroga & A. Sevilla, Guest Editors); “*Sustainable Energy Mix in Fragile Environments – Frameworks and Perspectives*,” (2018) (M.E. Tyler, Guest Editor); “*Disease Ecology: Galapagos Birds & their Parasites*,” (2018) (P.G. Parker, Guest Editor), “*Understanding Invasive Species in the Galapagos Islands: From the Molecular to the Landscape*,” (2018), (M. Torres & C.F. Mena, Guest Editors); “*Urban Galapagos – Transition to Sustainability in Complex Adaptive Systems*,” (2019), (T. Kvan & J. Karakiewicz, Guest Editors).

Co-Editor of Special Issues in the *Journal of Vegetation Science* (1994), *Photogrammetric Engineering and Remote Sensing* (2002, 2008), *Geomorphology* (2003, 2011), *GeoForum* (2008), *Journal of Land Use Science* (2008), *Remote Sensing* (2019).

Co-Edited a series of books for Kluwer Academic Publishers – “*GIS and Remote Sensing Applications in Biogeography and Ecology*,” (2001); “*Linking People, Place, and Policy: A GIScience Approach*,” (2002); and “*People and the Environment: Approaches for Linking Household and Community Surveys to Remote Sensing and GIS*,” (2003); Co-Editor for Elsevier, “*Mountain Geomorphology – Integrated Earth Systems*,” (2003); “*The Changing Alpine Treeline*,” (2009); and “*Geospatial Technologies and Geomorphological Mapping*,” (2012); Editor for Elsevier, “*Remote Sensing Applications for Society Benefits*,” (2017).

RESEARCH EMPHASES

• **General Areas of Research:** Geographic information systems, remote sensing, spatial analysis & modeling, physical geography, and human-environment interactions.

- **Human-Environment Interactions:** Relationships between environment and population in Thailand and Ecuador are examined with particular emphasis on the linkages between deforestation, agro-forestry systems, urbanization, population demographics and socio-economic patterns, household livelihoods, land use/land cover change, social-ecological vulnerability, and island sustainability.
- **Coupled Human-Natural Systems:** The integration of people, place, and environment are considered through the lens of Complexity Theory in which nonlinear relationships, feedback mechanism, emergent behavior, and complex adaptive systems are examined using multi-agent based models and spatial and statistical analyses. The general goal is to understand pattern-process relations within the context of a dynamic environment, evolving characteristics of multiple agents, interaction mechanisms, rules of behavior, and scenarios of change.
- **Geographic Methods:** Remote Sensing, GIS & spatial analysis and modeling approaches are examined within the context of landscape characterization and representation of social and biophysical systems with particular emphasis on the use of spatial models for landscape characterization and simulation of the drivers of LULC change.

RESEARCH OVERVIEW

My research examines coupled human-natural systems and land use/cover dynamics in the frontier environments of the Northern Ecuadorian Amazon, the Galapagos Islands, and in rural Nang Rong District, Northeastern Thailand. This research recognizes that at local, regional, and global scales land use changes are significantly altering land cover types and their spatial structures, perhaps at an accelerating pace. This transformation of the Earth’s surface, particularly through deforestation, agricultural extensification, secondary forest succession, and urbanization, is linked to a variety of scientific and policy issues articulated by international organizations, such as, the International Human Dimensions Program and the International Geosphere-Biosphere Program. In addition, program initiatives of the National Science Foundation (e.g., Coupled Natural-Human Systems Program), National Aeronautics and Space Administration (e.g., Land Cover/Land Use Change Program), and the National Institutes of Health (e.g., National Institutes for Child Health and Development Program and the former Roadmap Initiatives) revolve around the human dimensions of land use/cover change and the proximate and distal causes and consequences of such changes.

My research also emphasizes pattern-process relationships at the alpine and sub-alpine environments of Glacier National Park, Montana, the Northern Rocky Mountains, and, more recently, the mountains of the US American West. With particular emphasis on the alpine treeline ecotone, the

biotic and abiotic factors and disturbance regimes are examined, particularly, those that are mediated by local to global forcing functions that affect the loss of biodiversity, and represents ecological indicators of climate change. More broadly, my research seeks to understand ecological, biogeographic, and geomorphic factors affecting landscape patterns at a host of space-time scales.

Finally, my research focuses on landscape characterization through statistical and spatial modeling and spatial analysis approaches. Geospatial data and spatial digital technologies (e.g., geographic information systems, satellite remote sensing, and global positioning systems) and approaches are developed and applied to study ecological systems and linked social-ecological systems. Of particular interest are new developments in complexity theory that conceives the world as consisting of self-organized systems, either reproducing their state through negative feedbacks with their environment or moving along trajectories from one state to another as a result of positive feedbacks.

Biocomplexity combines social-ecological co-evolution and adaptive resilience to study coupled human-natural systems. Biocomplexity is described as the “properties emerging from the interplay of behavioral, biological, chemical, physical, and social interactions that affect, sustain, or are modified by living organisms, including humans” – it encompasses the complex interactions within and among ecological systems, the physical systems on which they depend, and the human systems with which they interact. My research in biocomplexity and system dynamics are motivated by questions that seek to understand the following broad areas of concern:

- How does a complex systems approach help explore the internal mechanisms of system dynamics and provide plausible explanations?
- How do results derived from applying complexity theory help in understanding decision-making across levels of social organization ranging from individual households to national governments?
- How do fundamental characteristics of complex dynamics of coupled natural-human systems limit their predictability, sustainability, and resilience?
- How can economic development and resource conservation be reconciled, and how can social and ecological systems adapt, leading to sustainability?
- What are the impacts of climate change on the behavioral shifts and adaptive capacities of social, terrestrial, and marine systems?
- Can Agent Based Models be used to explore the environment as well as scenarios of land use/land cover dynamics by integrating the characteristics of agents (e.g., individuals and households), a changing environment, neighborhood associations, and interaction rules?
- Can the goal of exploring “what if scenarios” of land use/cover change through spatial simulations provide links between theory and model outcomes, and trajectories of land change set by the pathways of human-environment interactions?

EDUCATION

Degree	Institution	Specialty	Year
Ph.D.	Oregon State University Corvallis, OR 97331	Resource & Physical Geography	1977
M.S.	Oregon State University Corvallis, OR 97331	Resource & Physical Geography	1975
B.S.	Fitchburg State College Fitchburg, MA 01420	Physical & Earth Sciences	1973

POSITIONS

<u>Organization</u>	<u>Dates</u>	<u>Title</u>
UNC-USFQ Galapagos Science Ctr. San Cristobal Island Galapagos Archipelago, Ecuador	2011-present	Professor & Co-Director
Center for Galapagos Studies University of North Carolina Chapel Hill, NC	2010-present	Professor & Director
Spatial Analysis Unit Carolina Population Center University of North Carolina Chapel Hill, NC	1995-1998	Organizer and Director
Spatial Analysis Lab Department of Geography University of North Carolina Chapel Hill, NC	1986-2011	Professor & Director
Department of Geography University of North Carolina Chapel Hill	1991-present	Full Professor & Director
Department of Geography University of North Carolina Chapel Hill	1986-1991	Associate Professor & Director
Department of Geography Oklahoma State University Stillwater, OK	1981-1986	Associate Professor
Center for Applications of Remote Sensing Oklahoma State University Stillwater, OK	1977-1985	Organizer & Director
Department of Geography Oklahoma State University Stillwater, OK	1977-1981	Assistant Professor

SELECTED RECOGNITION & RESPONSIBILITIES

- Invited Speaker, 2018. Conference on Sustainable Development under Globalization and New International Urbanization, Island Cities and Urban Archipelagos, Zhoushan, China.
- Invited Speaker, 2018. "Human-Environment Interactions in Island Ecosystems – Social and Ecological Forces of Change," Pontifical Catholic University of Chile (PUC-Chile), Santiago, Chile.
- Invited Speaker, 2018. "The UNC Galapagos Initiative: Research Opportunities in Darwin's Paradise," Undergraduate Research Symposium, University of North Carolina at Chapel Hill.
- Invited Speaker, 2018. NASA Land Cover/Land Use Change, Science Team Meeting, Gaithersburg, Maryland, "Synthesis of Drivers of LCLUC on Islands."
- Invited Speaker, 2017. NASA Land Cover/Land Use Change (LCLUC) Fall Webinar Series: Synthesis Studies, Synthesis of Drivers, Patterns, and Trajectories of LCLUC in Island Ecosystems.

- Invited Speaker, 2016. Arthur M. Sackler Colloquia of the National Academy of Sciences on “Coupled Human and Environment Systems,” Washington, DC.
- National Association of Foreign Student Affairs (NAFSA), Association of International Educators selected the University of North Carolina at Chapel Hill as a winner of the 2016 Senator Paul Simon Spotlight Award for the Galapagos Initiative. The award is granted to just three universities each year that demonstrate innovation and creativity in a particular area of internationalization – i.e., the collaborative partnership between UNC-Chapel Hill and the Universidad San Francisco de Quito and the development of the Galapagos Initiative, with particular emphasis on the development of the Galapagos Science Center, an education, research, and community outreach facility on San Cristobal Island in the Galapagos Archipelago of Ecuador (Carlos F. Mena & Stephen J. Walsh, Program Founders & GSC Co-Directors).
- Invited Reviewer, Ralph Powe Junior Faculty Enhancement Award Program, 2016. Oak Ridge Associated Universities (ORAU).
- Named Best College/University Article for 2014 by the National Council for Geographic Education, *Journal of Geography Awards Task Force*; Brewington, L., Engie, K., Walsh, S.J., Mena, C.F. 2013. Collaborative Learning & Global Education: Human-Environment Interactions in the Galapagos Islands, Ecuador. *Journal of Geography*, 112(5): 179-192.
- Course Instructor, 2014. Geospatial Data & Technologies (S.J. Walsh & C.F. Mena), USAID Training Grant, *Certificate in Amazonian Studies*, Universidad San Francisco de Quito, Ecuador.
- Invited Member, Graduate School Review Panel, 2014. Department of Marine Sciences & Institute for Marine Sciences (Morehead City, NC), University of North Carolina at Chapel Hill.
- Invited NASA Peer Review Panel, 2014. Terrestrial Ecology, New Investigator Program, Washington, DC.
- Invited Program Reviewer, 2011. NSF Partnerships for International Research and Education (PIRE): Collaborative Research and Training in Social Context, Population Processes, and Environmental Change, Institute for Social Research, University of Michigan.
- Member, Terra Populus Advisory Board, A Global Population-Environment Data Network, Minnesota Population Center, University of Minnesota, 2012-present.
- Council for International Exchange of Scholars, Fulbright Foreign Scholarship Board, and Bureau of Education and Cultural Affairs of the US Department of State, Fulbright Specialist Roster Candidate, 2011-2015.
- Marquis “Who’s Who in America” 2011.
- Invited Session Co-Organizer, 2009 (C.F. Mena & S.J. Walsh). Population-Environment Interactions in the Galapagos Islands, Galapagos Science Symposium, Puerto Ayora, Santa Cruz Island, Galapagos, Charles Darwin Foundation.
- Invited Workshop Participant, 2009. Vulnerability of the Galapagos Islands to Climate Change, Conservation International and World Wildlife Fund, Santa Cruz Island, Galapagos Islands, Ecuador.
- Panel Member, 2009. NASA Fellowship – Carbon Cycle & Ecosystems, Washington, DC.
- Co-Organizer, 2008. Research Symposium on Integrative Research in the Galapagos Islands, University of San Francisco Quito, Ecuador and the University of North Carolina at Chapel Hill, Quito, Ecuador

- Expert Panel on Geospatial Research, Surveillance and Capacity Building, Center for Disease Control, Atlanta, Georgia, 2008.
- Honors for Lifetime Achievement, 2007. Southeastern Division, Association of American Geographers.
- Distinguished Teaching Award for Post-Baccalaureate Instruction, 2008. University of North Carolina at Chapel Hill.
- Invited PhD External Examiner, 2007. University of Copenhagen, Department of Geography.
- Invited Session Organizer, 2007. Population Association of America, *Modeling Population and Environment*. New York City.
- Elected Fellow of the American Association for the Advancement of Science, 2006; honored for *“substantive landscape characterization and spatial analysis through remote sensing and geographic information science.”*
- Invited Special Session Presentation, 2006; Scenarios of Land Use and Land Cover Change Using Spatial Simulation Models, “Space Matters! Spatial Dimensions of Complex Interactions between People and the Natural Environment,” Daniel Brown and So-Min Cheong, Co-Organizers, American Association for the Advancement of Science.
- Invited Special Session Presentation, 2006. Pattern-Process Relations in Coupled Human-Natural Systems: Reflections on Theories, Frameworks, and Perspectives, Presidential Plenary, Association of American Geographers.
- Invited PhD External Examiner, 2005. University of Leicester, Department of Geography, United Kingdom.
- Member, 2004. Social Sciences and Population Studies Study Section (Review Panel), National Institutes of Health.
- Director, 2004-2010, Graduate Certificate Program in Geographic Information Science, Department of Geography, University of North Carolina – Chapel Hill.
- Edward J. Taaffe Colloquium Series, Distinguished Lecturer, 2004. Ohio State University, Department of Geography.
- Co-Organizer, 2004, “Modeling Land Use and Land Cover Dynamics 1 & 2,” International Geographical Union, Glasgow, Scotland.
- Member, Honors Committee A, 2004-2006, Association of American Geographers.
- Elected, 2003-2005, President, Southeastern Division of the Association of American Geographers.
- Member, 2003, Committee of Visitors, National Science Foundation, Ad Hoc Review Subcommittee of the NSF Advisory Committee for the Social, Behavioral, and Economic Sciences, emphasis on the program review of Anthropological and Geographic Sciences Cluster.
- Ida Beam Distinguished Visiting Professor, 2002, University of Iowa, Department of Geography.
- Co-Organizer, 2001-2002, Workshop on “Linking People and Pixels: Human Actions and Landuse/Landcover Change,” National Science Foundation, Biocomplexity Program, East-West Center, Honolulu, Hawaii.
- Co-Organizer & Program Chair, 2001, Binghamton Geomorphology Symposium, Chapel Hill, NC.
- Vice-President and Program Chair, 2001-2002, Southeastern Division of the Association of American Geographers.

- Co-Editor, 2001, Special Issue of *Geomorphology* (Elsevier), "Mountain Geomorphology – Integrating Earth Systems"
- Association of American Geographers, 2001, National Honors for Distinguished Scholarship.
- Member, 2001, Special Emphasis Panel, National Institutes of Health, National Institute for Child Health and Development
- Co-Organizer and Co-Editor (L. Bian & S.J. Walsh), 2002, Special Issue, "Characterizing and Modeling Landscape Dynamics," *Photogrammetric Engineering and Remote Sensing*, 68(10): 999-1105.
- Chair, 2001-2002, Research Grants Committee, Association of American Geographers.
- First Prize Recipient, 2000, ERDAS Award for Best Scientific Paper in Remote Sensing from the American Society of Photogrammetry and Remote Sensing for the paper, "Scale-Dependent Relationships between Population and Environment in Northeastern Thailand," S.J. Walsh, T.P. Evans, W.F. Welsh, B. Entwisle, and R.R. Rindfuss in *Photogrammetric Engineering and Remote Sensing*, 65(1): 97-105.
- Elected, 2000-2002, Vice President, Southeastern Division of the Association of American Geographers.
- Invited Plenary Speaker, 2000, Emerging Technologies for Remote Sensing and GeoSpatial Data. National Academy of Science, Space Studies Board, "A Workshop on Moving Remote Sensing from Research to Applications: Case Studies of the Knowledge Transfer Process."
- Invited Workshop Presenter, 1999, Scale Dependent Relationships in Northeast Thailand: NDVI Variation as a Function of Biophysical, Social, and Geographical Factors and their Influence on Landscape Form and Function. *An International Workshop, "Current Progress in Quantifying Spatially-Explicit Causes and Effects of Land-Use/Cover Change: Examples from Different Parts of the World*, Wageningen, The Netherlands.
- Research Honors, 1999, Southeastern Division, Association of American Geographers.
- Chair, 1999-2001, Honors Committee, Remote Sensing Specialty Group, Association of American Geographers.
- Panel Member, 1997-1999, Dissertation Improvement Grant, National Science Foundation, Division of Geography and Regional Science.
- Elected, 1997-1998, Vice-Chair and Chair, 1998-2000, GIS Specialty Group, Association of American Geographers.
- Co-Guest Editor, 1998, Special Issue, Applications of Remote Sensing and GIS in Geomorphology, *Geomorphology*.
- Outstanding Contribution Award and Medal, 1997, Remote Sensing Specialty Group, Association of American Geographers.
- Member, 1996, UNC-CH Faculty Council.
- Organizer & Director, 1995-1998, Spatial Analysis Unit, Carolina Population Center, University of North Carolina.
- Named Professor of Geography, Amos H. Hawley Professorship, 1993-1996, University of North Carolina at Chapel Hill.
- Member, Editorial Board, *The Southeastern Geographer* (1992-1999), *Journal of Geography* (1995-2000), *Vegetatio* (1994-1996), *Plant Ecology*, (1996-present), *The Professional Geographer* (1997-2000), *GeoCarto International* (Education section: 2000-2010).

- Subject Matter Editor, “Landscape Ecology, Remote Sensing, and GIS,” for *Plant Ecology* (1999-2010).
- Site Review Panel, 1995, National Science Foundation; Conservation and Survey Division, University of Nebraska.
- Academic Councilor, GIS Specialty Group, Association of American Geographers, 1995-97.
- Co-Guest Editor, 1994, Special Issue, *Journal of Vegetation Science*.
- Chair, 1994-1996, Association of American Geographers, Remote Sensing Specialty Group.
- Vice-Chair, 1992-1994, Association of American Geographers, Remote Sensing Specialty Group.
- Member, National Research Review Board, National Institute of Health, 1993.
- Member, National Scientific Review Panel, U.S. Environmental Protection Agency, Environmental Monitoring Assessment Program, Landscape Characterization Program, 1990 and 1993.

INVITED LECTURES & REVIEWS

Appalachian State University	University of Copenhagen
East Carolina University	University of Florida
Griffith University, Australia	University of Georgia
Kansas State University	University of Iowa
King’s College London	University of Maryland
Mahidol University, Thailand	University of Massachusetts
Michigan State University	University of Michigan
National Center for Atmospheric Research	University of Minnesota
Ohio State University	University of Nebraska
Oregon State University	University of North Carolina - Charlotte
Queensland University of Technology	University of North Carolina – Chapel Hill
South Dakota State University	University of North Carolina – Greensboro
SUNY - Buffalo	University of Oklahoma
Texas A & M University	Universidad San Francisco de Quito, EC
Texas State University – San Marcos	University of South Alabama
University of Arizona	University of South Carolina
University of Brunei	University of the Sunshine Coast, Australia
University of California – Santa Barbara	Wageningen University, The Netherlands
University of Central Michigan	West Virginia University
University of Colorado	

TENURE & PROMOTION REVIEWS

Arizona State University	Rutgers University
Boston University	San Diego State University
Clark University	South Dakota State University
East Carolina University	Stanford University
Florida State University	Texas A & M University
George Mason University	University of Alabama
Kansas State University	University of Arizona
Michigan State University	University of British Columbia - Okanagan
Ohio State University	University of California at Los Angeles
Oregon State University	University of Florida
Queen’s University	University of Georgia

University of Iowa
 University of Kansas
 University of Kentucky
 University of Maryland
 University of Maryland – Baltimore County
 University of Michigan
 University of Minnesota
 University of Nebraska
 University of North Carolina – Charlotte
 University of Oklahoma
 University of Punjab - Pakistan

University of South Carolina
 University of Southern California
 University of Tennessee
 University of Texas – Austin
 University of Texas – Dallas
 University of Toronto
 University of Washington - Bothell
 University of Waterloo
 University of West Virginia
 Western Michigan University

ORGANIZATION MEMBER

Association of American Geographers; American Society for Photogrammetry and Remote Sensing; Southeastern Division, Association of American Geographers; American Association for the Advancement of Science.

GRANTS AND CONTRACTS FUNDED

- Walsh, S.J. 2018-2019. NASA Augmentation Opportunity: High Spatial Resolution, Commercial Satellite Data Applied to the Study of LCLUC on Islands. *NASA Land Cover/Land Use Change Program*, \$103,681.
- Walsh, S.J., Rindfuss, R.R., Bilsborrow, R.E., Brewington, L., Yang, S., Mattei, H. (2017-2020). Synthesis of Drivers, Patterns, and Trajectories of LCLUC in Island Ecosystems. *NASA Land Cover/Land Use Change Program*, \$720,000.
- Walsh, S.J. 2015-2016. A Sustainable Science Infrastructure in the Galapagos Islands: Designing a Long-Term Ecological Research Network & Critical Zone Observatory for Integrated Studies in the Galapagos Islands. *Vice Chancellor for Research, University of North Carolina at Chapel Hill*, \$89,500.
- Mena, C.F., Walsh, S.J., Rindfuss, R.R., Quiroga, D., Reck, G., Valle, C. 2013-2014. “Carrying Capacity” of the Galapagos Islands. *Galapagos National Park & World Wildlife Fund*, \$72,000.
- Bilsborrow, R.E., Mena, C.F., Walsh, S.J. 2012-2015. Improving University Education and Research on the Ecuadorian Amazon: A New Partnership. *US Agency for International Development*, \$749,915.
- Walsh, S.J. 2012-2014. Identification of Potential Reservoir Sites for Public Water Supplies in North Carolina: Development of a Data Management and Analysis System for Local and Regional Water Planners. *Clean Water Management Trust Fund*, \$131,000.
- Walsh, S.J. 2012. Galapagos Observation and Measurement Network: Strategic Design of an Intelligent Information System for the Galapagos Islands. *University of North Carolina at Chapel Hill*, \$43,000.
- Walsh, S.J., Rindfuss, Guilkey, D., Mena, C.F., Quiroga, D. 2011-2015. Modeling Population-Environment Interactions in a World Heritage Site: Comparison of Statistical and Agent Based Modeling Approaches to Study Complex Systems. *James S. McDonnell Foundation*, \$410,810.
- Walsh, S.J. and Mena, C.F., 2011. Galapagos Science Center, San Cristobal Island, Galapagos Archipelago of Ecuador. Partnership between the *University of North Carolina at Chapel Hill and the Universidad San Francisco de Quito*, \$2,500,000.

- Moreau, D.H. and Walsh, S.J., 2008-2010. Identification of Potential Reservoir Sites for Public Water Supplies in North Carolina. *North Carolina Clean Water Management Trust Fund*, \$206,783.
- Walsh, S.J., 2008-2010. Development of the Galapagos Initiative: Challenges & Opportunities. *University of North Carolina at Chapel Hill*, \$250,000.
- Walsh, S.J., 2009. Water and Health in a World Heritage Site: Development of a Spatial Data Infrastructure to Assess Diarrheal Diseases on Isabela Island, Galapagos Archipelago, Ecuador. *Institute for Global Health & Infectious Disease, University of North Carolina at Chapel Hill*, \$20,000.
- Walsh, S.J. 2008. *Center for Global Initiatives*, University of North Carolina at Chapel Hill, Galapagos Islands, Ecuador, \$5,000.
- Bilsborrow, R.E., Arguello, E., Suchindran, C.M., Walsh, S.J., 2007-2009. Frontier Migration and the Rural Environment in Ecuador. *National Institutes of Health*, \$373,848.
- Entwisle, B., Rindfuss, R.R., Walsh, S.J., Malanson, G.P., 2007-2009. Modeling Household Dynamics and Land Use. *National Institutes of Health*, \$399,210.
- Entwisle, B., Rindfuss, R.R., Walsh, S.J., Malanson, G.P., Mucha, P., 2007-2011. Dynamically-Integrating Macro and Micro Processes in Northeast Thailand, *National Institutes of Health*, \$1,176,008.
- Entwisle, B., Rindfuss, R.R., Walsh, S.J., Malanson, G.P., Mucha, P., 2007-2010. Marginality in a Marginal Environment: An Agent-Based Approach to Population-Environment Relationships, *National Science Foundation*, \$629,642.
- Walsh, S.J., Lu, F., Rindfuss, R.R., Emch, M., Wolford, W., Mena, C.F., 2007. A Preliminary Data Collection and Analysis of Population-Environment Interactions in the Galapagos Islands of Ecuador. *Carolina Population Center, University of North Carolina at Chapel Hill*, \$27,500.
- Walsh, S.J., 2006. Land Use/Land Cover in Frontier Environments: Cellular Automata and Agent Based Models for Testing Scenarios of Change. *National Science Foundation* (Supplement to Biocomplexity Grant), Workshop in Honolulu, Hawaii, \$15,000.
- Walsh, S.J., 2006. Research Initiatives in the Galapagos Islands, Ecuador: A Visiting Scholar from the Charles Darwin Research Station and/or the Galapagos National Park; University of North Carolina – Chapel Hill, North Carolina. *National Aeronautics and Space Administration* (\$3,000); Department of Geography (\$3,000), Carolina Population Center (\$3,000), Vice-Chancellor for Research (\$7,500), University of North Carolina at Chapel Hill, \$16,500.
- Walsh, S.J. 2006-2008. Feedbacks between Invasive Plants and Invasive Animals in the Galapagos Islands, Ecuador: Challenges to Ecosystem Restoration. *University Research Council, University of North Carolina at Chapel Hill*, \$3,600.
- Walsh, S.J., Bilsborrow, R.E., Malanson, G.P., 2006-2009. Multi-Agent Models of Land Cover/Land Use Dynamics in the Northern Ecuadorian Amazon: Coupling Human & Natural Systems through Pattern-Process Relationships and Spatial Simulations. *National Aeronautics and Space Administration*, ECO-LBA Program, \$254,441.
- Rindfuss, R.R., B. Entwisle, S.J. Walsh. 2004-2006. Population, Land use Change, and Health in Frontier Regions. *National Institutes of Health*, \$219,000.
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Walsh, S.J. 2018. "Human-Environment Interactions in Island Ecosystems – the Case of the Galapagos Islands of Ecuador," Keynote Address: Conference on Sustainable Development under Globalization and New International Urbanization, Island Cities and Urban Archipelagos, Zhoushan, China.

Walsh, S.J. 2018. "Coupled Human-Natural Systems in the Galapagos Islands," School of Ecological and Environmental Sciences, East China Normal University, Shanghai, China.

Walsh, S.J. & Mena, C.F. 2018. "Human-Environment Interactions in Island Ecosystems – Social and Ecological Forces of Change," Pontifical Catholic University of Chile (PUC-Chile), Santiago, Chile.

Walsh, S.J. 2018. "The UNC Galapagos Initiative: Research Opportunities in Darwin's Paradise," Undergraduate Research Symposium, University of North Carolina at Chapel Hill.

Walsh, S.J. 2018. A Biological Repository in the Galapagos Islands: Scope, Scale & Perspective. UNC International Affairs Advisory Council.

Walsh, S.J. 2018. Synthesis of Drivers, Patterns, and Trajectories of Land Cover/Land Use Change in Island Ecosystems. LCLUC Spring Science Team Meeting, Gaithersburg, Maryland.

Walsh, S.J. 2017. Patterns and Drivers of Change on Islands. NASA Land Cover/Land Use Change Synthesis Studies Webinar Series.

Walsh, S.J. 2017. Coupled Human-Natural Systems in the Galapagos Islands. Institute for the Environment, University of North Carolina at Chapel Hill

Walsh, S.J. 2017. The Galapagos Initiative. Alumni Committee on Racial and Ethnic Diversity, University of North Carolina at Chapel Hill.

Walsh, S.J., Page, P.H., Brewington, L., Mena, C.F. 2017. Beach Vulnerability in the Galapagos Islands. Community Symposium II, San Cristobal Island, Galapagos Archipelago, Ecuador.

Walsh, S.J. 2017. Demographic Change: Modeling Household Livelihoods of Galapagos Fishers. ABM-17 Symposium, San Diego, CA.

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- Walsh, S.J. 2015. Walking in the Footsteps of Darwin: Program of Research, Education, and Community Engagement in the Galapagos Islands of Ecuador. UNC World View, A Seminar for K-12 and Community College Educators: Latin America and North Carolina, Friday Center for Continuing Education, UNC-Chapel Hill.
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- Butler, D.R. and S.J. Walsh, 1989. Lithologic, Structural, and Topographic Controls of Snow-Avalanche Paths, Glacier National Park, Montana. *Association of American Geographers*, Baltimore, Maryland.
- Smith, R.C., S.J. Walsh, I.E. Von Essen, 1989. Conversion of the Rural Landscape: Spatial Modeling of Development Pressures through Automated GIS Techniques. *Association of American Geographers*, Baltimore, Maryland.
- Walsh, S.J. and D.R. Butler, 1989. Evaluation of Snow Avalanche Paths within Glacier National Park, Montana: Remote Sensing Digital Enhancements and GIS Spatial Modeling. *Association of American Geographers*, Baltimore, Maryland.
- Walsh, S.J. and D.R. Butler, 1989. Data Integration and Spatial Modeling within a Geographic Information System Environment: Some Geomorphic Implications. *American Association for the Advancement of Science*, San Francisco, California.
- Walsh, S.J., 1989. GIS Training and Spatial Modeling: the UNC Geography Program and Support Facilities. *North Carolina Department of Natural Resources and Community Development Conference on Geographic Information Systems*, Raleigh, NC.
- Walsh, S.J. and D.R. Butler, 1989. Spatial Pattern of Snow-Avalanche Path Location and Morphometry, Glacier National Park, Montana. *GIS/LIS '89*, Orlando, Florida.
- Walsh, S.J., 1988. Inherent and Operational Error within a GIS: Evaluation from a User Perspective. *Invited Speaker, National Center for Geographic Information and Analysis*, Santa Barbara, California.
- Walsh, S.J., 1987. Computer-Assisted Design and Geographic Information Systems: A Technique for Site Selection. *Department of Civil Engineering, North Carolina State University*, Raleigh.

- Walsh, S.J., 1987. Problems in Resource Assessment: Applications of Remote Sensing and Geographic Information Systems. *Department of Geography, University of North Carolina at Greensboro.*
- Walsh, S.J., 1987. Environmental Systems Management: GIS and Computer Modeling. *Department of Geography, University of North Carolina at Charlotte.*
- Walsh, S.J., 1987. Satellite Digital Enhancement and Classification for Resource Evaluation. Department of Geology, University of North Carolina at Chapel Hill.
- Walsh, S.J., 1987. Soil Moisture and Soil Temperature: Spatial and Temporal Variations in Oklahoma. *Associations of American Geographers, Portland, Oregon.*
- Walsh, S.J., D.R. Lightfoot, D.R. Butler, 1987. Assessment of Inherent and Operational Errors in Geographic Information Systems. *American Society for Photogrammetry and Remote Sensing and the American Congress on Surveying and Mapping, Baltimore, Maryland.*
- Walsh, S.J., 1987. Investigating the Behavior of Drought: A Remote Sensing Perspective. *Ecology Curriculum Seminar Series, University of North Carolina at Chapel Hill.*
- Walsh, S.J., 1987. State-of-the-Art: Remote Sensing and Geographic Information Systems Applied to Hydrologic Modeling. Invited presentation, *Workshop on Remote Sensing and Geographic Information Systems for use in Managing the Albemarle-Pamlico Estuary, Environmental Protection Agency and the State of North Carolina.*
- Walsh, S.J., 1987. Geographic Information Systems and Research Potential. *Environmental Protection Agency, Research Triangle Park, NC.*
- Walsh, S.J., 1987. Soil Moisture and Soil Temperature: Spatial and Temporal Variations in Oklahoma, *Association of American Geographers, Portland, Oregon.*
- Walsh, S.J., 1987. Assessing the Behavior of Drought: An In-Situ and Remote Sensing Perspective. *Southeastern Division of the Association of American Geographers, Charlotte, North Carolina.*
- Walsh, S.J., 1986. Comparison of the Advanced Very High Resolution Radiometer Satellite to Meteorological Drought Indices, *Canadian Association of Geographers, Calgary, Alberta.*
- Walsh, S.J., 1986. Analysis of Soil Moisture and Soil Techniques: Models of Spatial and Temporal Variability. *Southeast Association of American Geographers, Lexington, Kentucky.*
- Walsh, S.J., 1986. Drought Assessment through Advanced Very High Resolution Radiometer Satellite Data. *Associations of American Geographers, Applied Geography Specialty Group, West Point, New York.*
- Walsh, S.J., 1985. Satellite Reconnaissance and Computer Modeling. *Association of American Geographers, Detroit, Michigan.*
- Walsh, S.J., 1985. Hydrologic Modeling through Remote Sensing and Geographic Information Systems. *Applied Geography Conference, Denton, Texas.*
- Walsh, S.J. and F. Mynar II, 1985. Comparison of a Landsat Digital Enhancement Techniques for Lineament Detection. *Geological Society of America, Orlando, Florida.*
- Walsh, S.J., S. Panciera, T. DeGuire, 1985. Planning, Instrumentation, and Data Collection: Basic Field Research Considerations. *Geography Seminar Series, Oklahoma State University.*
- Walsh, S.J. and J.D. Croft, 1984. Techniques and Applications of Remote Sensing for Middle School Earth Science Honors Teachers. *National Science Foundation sponsored workshop.*

- Walsh, S.J. and J.D. Croft, 1984. Techniques and Applications for Secondary-Level Earth Science Honors Teachers in Analog and Digital Analysis of Remotely-Sensed Data. *National Science Foundation sponsored workshop.*
- Walsh, S.J., 1984. Drought and Evapotranspiration: Modeling and Coefficient Refinement through Remote Sensing Inputs. *NASA International Satellite Land-Surface Climatology Project, Stillwater, Oklahoma.*
- Walsh, S.J., 1983. Surface Modeling through a Geographic Information Approach. *National Severe Storms Laboratory, Norman, Oklahoma.*
- Walsh, S.J., 1983. Regional Evapotranspiration Estimates Using Landcover, Soils, and Atmospheric Data. *Association of American Geographers, Denver, Colorado.*
- Walsh, S.J., 1983. Comparison of Evapotranspiration Estimates Using Landsat Digital Data. *Association of American Geographers, Denver, Colorado.*
- Walsh, S.J., 1983. Non-Point Pollution Analysis through a Geographic Information Systems Approach. *Association of American Geographers, Denver, Colorado.*
- Walsh, S.J., 1983. Water Loss to the Atmosphere: A Geographic Information Systems Approach. *Association of American Geographers, Denver, Colorado.*
- Walsh, S.J., 1983. Modeling of the Regional Perspective: Biomass and Evapotranspiration. *U.S. Department of Agriculture, Agricultural Research Service, Durant, Oklahoma.*
- Walsh, S.J., 1983. Interfacing Ground Measures with Weather Satellites. *National Severe Storms Laboratory, Norman, Oklahoma.*
- Walsh, S.J., 1982. Geographic Information System Approach to Water Resource Management. *OSU Water Resource Research Institute Conference, Horizons in Water.*
- Walsh, S.J., 1982. Incorporation of Socioeconomic Data in Geographic Information Systems. *Oklahoma Department of Economic and Community Affairs.*
- Walsh, S.J., 1982. Geologic Prospecting. *Phillips Petroleum Company.*
- Walsh, S.J., 1982. CARS: Uses by Foresters. *Society of American Foresters, Oklahoma Division.*
- Walsh, S.J., 1982. Information Systems and Geologic Investigation. *Oklahoma Geological Survey.*
- Blanchard, W.A., S.J. Walsh, M.A. Williams, 1982. The Oklahoma Geographic Information Retrieval System: A Method of Environmental Assessment. *United States Geological Survey, Remote Sensing Conference, Rolla, Missouri.*
- Mynar, F., S.J. Walsh, M.S. Gregory, 1982. Computer Enhancement of Remotely-Sensed Data for Lineament Detection. *United States Geological Survey, Remote Sensing Conference, Rolla, Missouri.*
- Walsh, S.J., 1982. The Oklahoma Geographic Information Retrieval System: A Strategy for Resource Management. *Southwest Association of American Geographers, Hot Springs, Arkansas.*
- Walsh, S.J., 1981. Mechanics of Monitoring Forest Clearcuts and Their Regeneration. *Seventh International Symposium on Machine Processing of Remotely-Sensed Data, Purdue University, Laboratory for Application of Remote Sensing, West Lafayette, Indiana.*
- Walsh, S.J., 1980. Reconnaissance and Mapping of Natural Resources. *Oklahoma Governor's Cabinet on Natural Resources.*

- Walsh, S.J., 1980. Remote Sensing and Digital Processing. *Institute of Electrical and Electronics Engineers, Tulsa Section.*
- Walsh, S.J., 1980. Urban Change Detection for Population Modeling. *Public Service Company of Oklahoma, Tulsa, Oklahoma.*
- Walsh, S.J., 1980. Mapping of Forest Clearcuts in Southeast Oklahoma. *Weyerhaeuser Company, Wright City, Oklahoma.*
- Walsh, S.J., 1980. Remote Sensing of Water Resources. *Oklahoma State University Water Research Seminar Series.*
- Walsh, S.J., 1980. Role of Center for Applications of Remote Sensing in Oklahoma. *Oklahoma Academy of Science.*
- Walsh, S.J., 1979. Remote Sensing in Oklahoma. *Oklahoma Academy of Science, Edmond, Oklahoma.*
- Walsh, S.J., 1979. Wetlands Mapping Through Remote Sensing. *U.S. Army Corps of Engineers, Navigation Branch, Tulsa District, U.S. Environmental Protection Agency, Southwest District, Waterways Experiment Station, Vicksburg, Mississippi.*
- Walsh, S.J., 1979. Wildlife Habitat Mapping and Monitoring. *U.S. Army Corps of Engineers, Environmental Branch, Tulsa District.*
- Walsh, S.J., 1979. Mapping of Natural Area Preserves through Color Infrared Aerial Photography. *Oklahoma Department of Tourism and Recreation.*
- Walsh, S.J., 1979. A Vegetation Analysis of Crater Lake National Park, Oregon, Utilizing LANDSAT II Digital Tapes and High Flight U-2 Infrared Imagery. *Science and Resource Management Conference, Pacific Northwest Region, National Park Service, Oregon State University, Corvallis, Oregon.*
- Walsh, S.J., 1978. Differentiation and Mapping of Coniferous Tree Species within Crater Lake National Park, Oregon through use of LANDSAT Digital Tapes. *Association of American Geographers, New Orleans, Louisiana.*
- Walsh, S.J., 1978. Terrestrial and Aquatic Vegetation Mapping. *U.S. Corps of Engineers, Tulsa, Oklahoma.*
- Walsh, S.J., 1978. Wildlife Habitat Mapping Through Remote Sensing Techniques. *U.S. Fish and Wildlife Service, Tulsa, Oklahoma.*
- Walsh, S.J., 1977. Uses of Remote Sensing in Resource Management. *National Park Service Regional Center Headquarters, Denver, Colorado.*
- Walsh, S.J., 1977. Remote Sensing and Its Use in Resource Management. *Oklahoma Academy of Science.*
- Walsh, S.J., 1975. Analysis of Stone and Sand and Gravel Statistics for Selected Counties in Oregon. *Oregon Academy of Science.*

THESES & DISSERTATIONS: COMMITTEE CHAIR

- Francisco Laso, 2020, PhD. In Progress.
- Kim Engie, 2015, PhD. *Adaptation and Shifting Livelihoods of Small-Scale Fishers in the Galapagos Marine Reserve, Ecuador.*
- Amy McCleary, 2013, PhD. *Characterizing Human-Environment Interactions in the Galapagos Islands: a Case Study of Land Use/Land Cover Dynamics on Isabela Island.*

- Timothy Morrissey, 2013, MA. *NCResSys: A Geospatial Modeling and Information System for the Identification of Potential Municipal Water Supply Reservoir Locations across the State of North Carolina*.
- Laura Brewington, 2012, PhD. *The Politics of Invasion: Defining and Defending the Natural, Native and Legal in the Galapagos Islands of Ecuador* [Research Scientist, East-West Center, Honolulu, Hawaii]
- Benjamin W. Heumann, 2011, PhD. *Remote Sensing of Mangroves Composition and Structure in the Galapagos Islands*. [Assistant Professor of Geography, Western Michigan University]
- Piyawat Katewongsa, 2011, PhD. *Land Use Change in Nang Rong, Thailand*. Mahidol University, Thailand, International Co-Chair.
- Daniel J. Weiss, 2009, PhD. *Alpine Treeline Ecotones in the Western United States: A Multi-Scale Comparative Assessment of Environmental Factors Influencing Pattern-Process Relations*. [Post-Doctoral Student, Oxford University, UK]
- Patricia E. Polo, 2009, MA. *Nature-Culture Interactions: Understanding the Prevalence of Malaria in the Northern Ecuadorian Amazon*.
- Christine M. Erlien, 2008, PhD. *Household and Community Effects on Land Use/Land Cover Dynamics in the Northern Ecuadorian Amazon Frontier*. [Program Coordinator, Duke University]
- Carlos F. Mena, 2007, PhD. *Characterizing and Modeling Agricultural and Forest Trajectories in the Northern Ecuadorian Amazon: Spatial Heterogeneity, Socioeconomic Drivers, and Spatial Simulations*. [Associate Professor, Department of Environmental Sciences, University of San Francisco – Quito]
- Yang Shao, 2007, PhD. *Mapping and Modeling the Rural-Urban Landscape in Thailand: Physical, Spectral, and Spatial Relations of Population-Environment Interactions* [Assistant Professor of Geography, Virginia Tech University].
- Gregory N. Taff, 2007, PhD. *Land Use and Land Cover Change in the Context of Post-Soviet Land Policy Reform in Gauja National Park, Latvia*. [Research Scientist, Norwegian Forest and Landscape Institute, Norway]
- Kriengsak Rojnkuressatien, 2006, PhD. *Geographical Accessibility and Land-Use and Land-Cover Dynamics: the Case of Nang Rong District, Northeast Thailand*. [Assistant Professor, Institute for Population and Social Research, Mahidol University, Bangkok, Thailand]
- Evan S. Hammer, 2004, MA. *Leaf Area Index Variation in Krummholz Patches, Glacier National Park, Montana, USA*.
- Sean McKnight, 2004, MA, *Composition and Spatial Structure of Turf-Banked Terraces, Glacier National Park, Montana, USA*.
- Randy Pullen, 2002, MA. *Spatial Links between Households and Land Parcels in Northeast Thailand: An Approach for Assessing Land Use Patterns*.
- William F. Welsh, 2001, PhD. *Agro-Ecological Sustainability and Land Degradation Potential in Nang Rong, Thailand*. [Associate Professor of Geography, Eastern Michigan University]
- Joseph P. Messina, 2001, PhD. *A Complex Systems Approach to Dynamic Spatial Simulation Modeling: Landuse and Landcover Change in the Ecuadorian Amazon*. [Professor of Geography, Michigan State University]

- Phillip M. McDaniel, 2000, MA. *Household and Community Drivers of Land Clearing: Human-Environment Interactions in the Ecuadorian Amazon.*
- Courtney E. Hart, 2000, MA. *Assessing the Nature and Magnitude of Landuse/Landcover Change in Northeast Thailand.*
- Thomas W. Crawford, 2000, Ph.D. *Human-Environment Interactions and Regional Change in Northeast Thailand: Relationships between Socio-Economic, Environmental, and Geographic Patterns.* [Associate Professor of Geography, East Carolina University]
- Kelley A. Crews, 2000, PhD. *Integrated Landscape Characterization via Landscape Ecology and GIScience: A Policy Ecology of Northeast Thailand.* [Associate Professor of Geography and the Environment, University of Texas – Austin]
- Gabriela Valdivia, 1999, MA. *Colonization, Communas, and Reserves: The Ecology of Land Use and Land Cover Change in Indigenous Communities of Northeast Ecuador.*
- Tom P. Evans, 1998, PhD. *Village Boundary Form, Function, and Composition: Social, Spatial, and Environmental Linkages in Nang Rong District, Northeast Thailand.* [Professor of Geography, Indiana University]
- Philip A. Townsend, 1997, PhD. *Biodiversity and Environmental Gradients in Deepwater Swamps of the Roanoke River Floodplain, North Carolina.* [Professor of Forest Ecology, University of Wisconsin – Madison]
- Robert A. Chastain, Jr., 1995, MA. *Variation in the Pattern and Composition of Plant Productivity within the Roanoke River Floodplain: A Seasonal Perspective.*
- Stephen J. McGregor, 1995, PhD. *An Integrated Geographic Information Systems Approach for Modeling Autogenic Succession Potential of the Alpine Tundra Ecosystem in Glacier National Park, Montana.* [Lead Project Scientist, US Department of Defense]
- Thomas R. Allen, 1995, PhD. *Relationships between Spatial Pattern and Environment at the Alpine Treeline Ecotone, Glacier National Park, Montana.* [Associate Professor of Geography, East Carolina University]
- James Stewart, 1995, MA. *Topography and Fire: Factors Affecting Landscape Productivity in Glacier National Park, Montana.*
- Barry F. Doll, 1993. MA. *Use of Topographic Information in Estimating Areal Precipitation in the Mountain Environment of Western North Carolina.*
- Thaddeus J. Bara, 1993. MA. *A Probabilistic Approach to Land Cover Regionalization in Glacier National Park, Montana.*
- Daniel G. Brown. 1992. PhD. *Topographical and Biophysical Modeling of Vegetation Patterns at Alpine Treeline.* [Professor of Natural Resources and the Environment, University of Michigan]
- Ling Bian, 1991. PhD. *Effects of Spatial Scale on Estimating the Relationship between Vegetation and Topography in a Mountainous Environment.* [Professor of Geography, SUNY – Buffalo]
- Bonnie M. Henderson, 1991, MA. *Plowed, Paved, on in Succession: A Study of Landscape Change in Orange County, North Carolina.*
- Nina M. Kelly, 1991, MA. *Role of Topography in the Establishment and Maintenance of Treeline Ecosystem Components in Glacier National Park, Montana: An Integration of Remote Sensing Methods and Digital Elevation Models.*

- Curtis Hinton, 1990, MA. *Modeling Nonpoint Pollution and Site Factors for the Location of Water Retention Ponds.*
- Elsa M. Joao, 1989, MA. *Simulation of Nonpoint Pollution Levels as a Consequence of Watershed Development Alternatives: Spatial Modeling through Geographic Information Systems Techniques.*
- Daniel G. Brown, 1989, MA. *Modeling Alpine Lake Turbidity Levels through Morphometric Basin Variables: Integration of Remote Sensing and Statistical Approaches.*
- Ian Von Essen, 1988, MA. *Automated Approaches for Displaying Spatially Oriented Time Series Data Through Image Processing Techniques.*
- Craig G. Fleishmann, 1988, MA. *Multi-Temporal AVHRR Digital Data: A Dynamic Approach to Land Cover Evaluation.*
- Therese M. DeGuire, 1986, MS. *Variations in Grassland Biomass in Central Oklahoma: A Spatial and Temporal Analysis.*
- Dale R. Lightfoot, 1986, MS. *Assessment of Inherent and Operational Errors in Geographic Information Systems.*
- Frank Mynar, 1985, MS. *Comparison of Landsat Digital Enhancement Techniques for Lineament Detection.*
- Mark A. Karaska, 1985, MS. *Impact of Environmental Variables on Spectral Signatures Acquired by the Landsat Thematic Mapper.*
- Amanda L. Frick, 1984, MS. *Detecting Change in a Louisiana Gulf Coast Marsh Using Remote Sensing.*
- Margaret M. Williams, 1983, MS. *Comparison of Methods of Estimating Evapotranspiration.*
- Roxane DiPiazza, 1983, MS. *A Model for Locating Wind Generating Sites.*
- Larry M. Bunse, 1982, MS. *Application of a Geographic Information System to the Management of Surface Coal Mines.*

POST-DOCTORAL STUDENTS

- Laura Brewington, 2012-2013. Post-Doctoral Research, UNC Center for Galapagos Studies & the Galapagos Science Center, San Cristobal Island, Galapagos Archipelago, Ecuador.
- Gabriela Valdivia, 2007-2009. National Science Foundation, Post-Doctoral Research Fellowship, *Agrarian Revolution in the Bolivian Lowlands: New Populism and the Local Spaces of Social Change.*
- Carlos F. Mena, 2007. Department of Geography, University of North Carolina at Chapel Hill, *Population-Environment Interactions in the Galapagos Islands of Ecuador.*
- Kelley A. Crews, 2000. Department of Geography & Carolina Population Center, University of North Carolina at Chapel Hill, *Patterns and Processes of Land Use Change in the Ecuadorian Amazon.*

UNDERGRADUATE HONORS THESIS

- Shannon Steel, 2014, Undergraduate Honors Thesis. *Sewage Waste on San Cristobal Islands: It's Not Just a Numbers Game* (Supervisor)
- Katie Overby, 2014, Undergraduate Honors Thesis. *Sewage Impacts on Water Quality and Antibiotic Resistance in Beach Waters in the Galapagos Islands* (Reader).

Emily Willis, 2011, Undergraduate Honors Thesis. *Institutions and Governance in the Galapagos Islands, Ecuador* (Supervisor).

Molly Vogt, 1996, Undergraduate Honors Thesis. *Integration of Spatial and Social Data in the Investigation of Landcover and Population Dynamics: Satellite Imagery and Village-Level Survey Data in Nang Rong, Thailand* (Supervisor).

JOURNAL AND/OR RESEARCH PROPOSAL REVIEWER

Academy of Finland
 Agriculture, Ecosystems and Environment
 American Philosophical Society
 American Society for Photogrammetry and Remote Sensing (Monograph Series)
 Annals of the Association of American Geographers
 Applied Geography
 Applied Vegetation Science
 Arctic and Alpine Research
 BioScience
 Cartography and GIS
 Ecosystems
 Environmental Impact Assessment Review
 Environment and Planning A
 Eurasian Geography and Economics
 Geographical Analysis
 GeoCarto International
 GeoForum
 Geographical & Environmental Modelling
 Geomorphology
 Global Change Biology
 Handbook of Sustainability
 Health Services Research
 High Mountain Press
 International Council of Scientific Unions, Committee on Teaching of Science
 International Journal of Geographic Information Systems
 International Journal of Remote Sensing
 ISPRS Journal of Photogrammetry and Remote Sensing
 Israel Science Foundation
 Journal of Geography
 Journal of Geographical Systems
 Journal of Geophysical Research – Atmospheres
 Journal of Higher Education
 Journal of Rural Health
 Journal of Vegetation Science
 J. W. Jones Ecological Research Center
 National Aeronautics and Space Administration
 NASA – Land Cover/Land Use Change Program
 NASA – New Investigator Program
 NASA – Solid Earth and Natural Hazards Research and Application Program
 National Science Foundation

National Fish and Wildlife Foundation
 National Geographic Research
 National Geographic Society
 National Institute of Health
 National Sea Grant Office, National Oceanic and Atmospheric Administration
 National Research Council
 National Science Foundation, Geography and Regional Science
 National Science Foundation, Climate Dynamics Program
 Natural Sciences and Engineering Research Council of Canada
 The Netherlands Foundation for the Advancement of Tropical Research
 Oxford University Press
 Pacific Northwest National Laboratory
 Photogrammetric Engineering and Remote Sensing
 Physical Geography
 Plant Ecology
 Prentice-Hall Publishers
 Proceedings of the National Academy of Sciences
 The Professional Geographer
 Remote Sensing of Environment
 Southeast Association of American Geographers
 The National Geographic Society
 Transactions in GIS
 United Nations Educational, Scientific, and Cultural Organization-Sponsored Encyclopedia of Life Support Systems
 U.S. Environmental Protection Agency
 U.S. Forest Service
 U.S. National Marine Fisheries Service
 Water Resources Research Institute
 World Development

COURSES TAUGHT

Remote Sensing (Introduction & Advanced)
 Geographic Information Systems (Introduction & Applied)
 Geospatial Data & Technologies
 People & Environment in Southeast Asia
 Population-Environment Interactions in the Galapagos Islands
 Graduate Seminar in Geographic Information Systems
 Graduate Seminar on Population-Environment Interactions
 First Year Seminar on Mountain Environments
 First Year Seminar on Island Ecosystems