

Tania del Mar López-Marrero

Department of Social Sciences
University of Puerto Rico, Mayagüez Campus
Call Box 9000
Mayagüez, PR 00681
Email: tania.lopez1@uprm.edu
Webpage: <http://www.tlopezmarrero.com>

RESEARCH INTERESTS AND EXPERTISE

Natural hazards and disasters, Ecosystems services and drivers of ecosystem change, Land use/land cover change, Mixed methods, Participatory research techniques, Geographic Information Systems, Cartography

EDUCATION

- 2004-2008 Ph.D., Geography with emphasis in Human-Environment relationships and Cartography, The Pennsylvania State University, Department of Geography
Dissertation: “Adaptive Capacity and Resilience to Floods in the Caribbean: A Case Study from Flood-Prone Communities in Puerto Rico”
- 2000-2002 M.Sc., Geography with emphasis in Human-Environment relationships, The Pennsylvania State University, Department of Geography
Thesis: “Characterization and Modeling of Land-Cover Change: The Case of Urban Expansion in a Caribbean Landscape”
- 1992-1997 B.Sc., concentration in Environmental Science, University of Puerto Rico, Natural Sciences Faculty
Undergraduate Thesis: “The Effect of Land Use on Soil Erosion in the Guadiana Watershed in Puerto Rico”

PROFESSIONAL EXPERIENCE

- 2018- Associate Professor. Department of Social Sciences, University of Puerto Rico, Mayagüez Campus
- 2014- Director. Interdisciplinary Center for Coastal Studies, University of Puerto Rico, Mayagüez Campus
- 2014-2018 Assistant Professor. Department of Social Sciences, University of Puerto Rico, Mayagüez Campus

- 2015-2016 Associate Director. Sea Grant College Program, University of Puerto Rico, Mayagüez Campus
- 2011-2014 Assistant Professor. Department of Geography and Department of Latino and Hispanic Caribbean Studies, Rutgers University
- 2010-2011 Visiting Researcher. Department of Geography and Department of Latino and Hispanic Caribbean Studies, Rutgers University
- 2008-2010 Assistant Researcher. Institute of Caribbean Studies, University of Puerto Rico, Río Piedras Campus
- 2004-2005 Teaching Assistant. Department of Geography, The Pennsylvania State University
- 2002-2004 Instructor. Department of Geography, University of Puerto Rico, Río Piedras Campus
- 2001-2002 Teaching Assistant. Department of Geography, The Pennsylvania State University
- 2001 Geographic Information Systems (GIS) Analyst. USDA Forest Service International Institute of Tropical Forestry, San Juan, PR
- 1998-2000 GIS and Cartographic Technician. USDA Forest Service International Institute of Tropical Forestry, San Juan, PR
- 1998 GIS Intern. La Selva Biological Station, Puerto Viejo, Costa Rica
- 1997 Laboratory Technician. Department of Biology, University of Puerto Rico, Río Piedras Campus

PUBLICATIONS

Books:

- 2006 **López-Marrero, T.** and N. Villanueva Colón. *Atlas Ambiental de Puerto Rico*. San Juan, PR: University of Puerto Rico Press. 178 p.

Articles in peer-reviewed journals:

- 2020 Aguiar, A., B. Carby, E. Castellanos Abella, O. Darío Cardona, **T. López-Marrero**, V. Marchezini, L. Meyreyes, D. Olivato, R. Trajber and B. Wisner. *Success, Innovation and Challenge: School Safety and Disaster Education in South America and the Caribbean*. International Journal of Disaster Risk Reduction 44, 101395. DOI <https://doi.org/10.1016/j.ijdrr.2019.101395>.

- 2019 **López Marrero, T.**, T. Heartsill Scalley, C.F. Rivera López, I.A. Escalera García y M. Echevarría Ramos. *Broadening our understanding hurricanes and forests in the Caribbean island of Puerto Rico: Where and what should we study now?* *Forests* 10, 710. DOI <https://doi.org/10.3390/f10090710> .
- 2019 **López-Marrero, T.** and A. Castro Rivera. *Let's not forget about the non-land-falling cyclones: tendencies and impacts in Puerto Rico.* *Natural Hazards* 98(2):809-815. DOI <https://doi.org/10.1007/s11069-019-03716-y>.
- 2014 Heartsill Scalley T. and **T. López-Marrero.** *Land-cover composition, water resources and land management in the watersheds of the Luquillo Mountains, northeastern Puerto Rico.* *Caribbean Geography* 19: 43-68.
- 2013 **López-Marrero, T.**, J. Hampton, E. Vergara, J. Quiroz, K. Simovic, H. Arevalo. *Hazards and Disasters in the Insular Caribbean: A Systematic Literature Review.* *Caribbean Geography* 18: 84-104.
- 2012 **López-Marrero, T.** and T. Heartsill-Scalley. *Get Up, Stand Up: Environmental Situation, Threats, and Opportunities in the Insular Caribbean.* *Caribbean Studies* 40(2): 3-14.
- 2012 **López-Marrero, T.** and B. Wisner. *Not in the Same Boat: Disasters and Differential Vulnerability in the Insular Caribbean.* *Caribbean Studies* 40(2): 129-168.
- 2012 **López-Marrero, T.**, K.Yamane, T. Heartsill-Scalley, and N. Villanueva-Colón. *The Various Shapes of the Insular Caribbean: Population and Environment.* *Caribbean Studies* 40(2): 17-37.
- 2011 **López-Marrero, T.** and P. Tschakert. *From Theory to Practice: Enhancing Resilience to Floods in Exposed Communities.* *Environment and Urbanization* 23(1): 229-249. DOI: 10.1177/0956247810396055
- 2010 **López-Marrero, T.** *An Integrative Approach to Study and Promote Natural Hazards Adaptive Capacity.* *The Geographical Journal* 176(2): 150-163. DOI: 10.1111/j.1475-4959.2010.00353.x
- 2010 **López-Marrero, T.** and B. Yarnal. *Putting Adaptive Capacity into the Context of People's Lives: A Case Study of Two Flood-Prone Communities in Puerto Rico.* *Natural Hazards* 52: 277-297. DOI:10.1007/s11069-009-9370-7
- 2009 **López-Marrero, T.** *La capacidad de adaptación a peligros naturales desde una perspectiva social-comunitaria.* *Revista de Ciencias Sociales* 20: 106-127.

- 2003 **López-Marrero, T.** *The Study of Land Cover Change in a Caribbean Landscape: What has Happened in Puerto Rico During the Last Two Decades?* Caribbean Studies 31(2): 5-36
- 2002 Helmer, E.H., O.M. Ramos González, **T. López-Marrero**, M. Quiñonez, and W. Díaz. *Mapping the Forest Type and Land Cover of Puerto Rico, A Component of Caribbean Biodiversity Hotspot.* Caribbean Journal of Science 38(3-4): 165-183
- 2001 **López-Marrero, T.**, T.M. Aide, and J.R. Thomlinson. *Urban Expansion and the Loss of Prime Agricultural Lands in Puerto Rico.* Ambio 30: 49-54
- 1998 **López-Marrero, T.**, T.M. Aide, and F.N. Scatena. *The Effect of Land Use on Soil Erosion in the Guadiana Watershed in Puerto Rico.* Caribbean Journal of Science 34(3-4): 298-307
- 1996 Thomlinson, J.R., M. Serrano, **T. López-Marrero**, T.M. Aide, and J. Zimmerman. *Land Use Dynamics in a Post Agricultural Puertorrican Landscape (1936-1988).* Biotropica 28: 525-536

Article under review:

Castro-Rivera, A. and **T. López-Marrero.** *Allá viene el temporal: Major hurricanes in Puerto Rico between 1851 and 2019.* Under review: Caribbean Geography.

Book chapter:

- 2014 Lavell, A. and **T. López-Marrero.** "Disaster Risk Management in Latin America and the Caribbean: Four Decades of Evolution and Change, 1970 to 2010." Pp 229-247 in *Disaster Management: International Lessons in Risk Reduction, Response and Recovery*, A. López-Carresi, M. Fordham, B. Wisner, I. Kelman, and J.C. Gaillard (eds.). London: Earthscan/Routledge.

Special Journal Editions:

- 2013 **López-Marrero, T.** and D. Barker. *Caribbean Vulnerabilities: from Coping Strategies to Resilience Building.* Caribbean Geography 18(1).
- 2012 **López-Marrero, T.** and T. Heartsill-Scalley. *"Get Up, Stand Up": Environmental Situation, Threats, and Opportunities in the Insular Caribbean.* Caribbean Studies 40(2).
- 2009 Concepción, C.M. and **T. López-Marrero.** *Ambiente y Sociedad en Puerto Rico: Revista de Ciencias Sociales* 20(1).

Research reports and other publication:

- 2020 **López Marrero, T.** y A. Castro-Rivera. Actividad sísmica en Puerto Rico y sus alrededores. Centro Interdisciplinario de Estudios del Litoral. Mayagüez, PR: Universidad de Puerto Rico. 9 p.
- 2020 **López Marrero, T.** y A. Castro-Rivera. Actividad ciclónica en Puerto Rico y sus alrededores: 1867 al 2019. Centro Interdisciplinario de Estudios del Litoral. Mayagüez, PR: Universidad de Puerto Rico. 12 p.
- 2019 **López Marrero, T.** y Castro Rivera, A. Huracanes intensos en la cuenca del Atlántico y azotes en el Caribe insular: 1851 al 2019. Centro Interdisciplinario de Estudios del Litoral. Mayagüez, PR: Universidad de Puerto Rico. 6 p.
- 2019 Castro Rivera, A. y **López Marrero, T.** Por ahí viene el temporal: 169 años de azotes de ciclones tropicales en Puerto Rico. Centro Interdisciplinario de Estudios del Litoral. Mayagüez, PR: Universidad de Puerto Rico. 5 p.
- 2019 **López-Marrero, T.** e Isabella Cámara Torres. *Dinámicas poblacionales en los municipios del interior de Puerto Rico: 1980 al 2017*. Centro Interdisciplinario de Estudios del Litoral. Mayagüez, PR: Universidad de Puerto Rico, Recinto de Mayagüez. 66 p.
- 2018 **López-Marrero, T.**, A. Arocho-Barreto, I. Cámara-Torres, N. Castillo-Rivera, A. Castro-Rivera, H.B. Colón-Rodríguez, I.A. Escalera-García, M. Echevarría-Ramos, G. Franqui-Lugo, J.D. García-Santiago, N. Graniela-Marty, M.A. Lorenzo-Pérez, L. Martínez-Guzmán, C.F. Rivera-López, E.A. Ríos-Santiago, G.E. Sellas-Ramírez. 2018. *Un cambio categoría 4: Memorias del huracán María*. Centro Interdisciplinario de Estudios del Litoral. Mayagüez, PR: Universidad de Puerto Rico. 150 p.
- 2018 **López Marrero, T.** y A. Castro-Rivera. *Actividad ciclónica en Puerto Rico y sus alrededores: 1867 al 2017*. Centro Interdisciplinario de Estudios del Litoral. Mayagüez, PR: Universidad de Puerto Rico. 12 p.
- 2018 Castro Rivera, A. and **T. López-Marrero**. *Cartilla de los ciclones*. Programa Sea Grant. Mayaguez, PR: Universidad de Puerto Rico, Recinto de Mayaguez. 39 p.
- 2018 **López-Marrero, T.**, A. C.F. Rivera-López, J.D. García-Santiago, N. Castillo-Rivera and L. Martínez-Guzmán. Otero-Ramos y H.I. Nieves-Crespo. *Amenazas naturales, desastres y memoria social: Una bibliografía anotada*. Centro Interdisciplinario de Estudios del Litoral. Mayagüez, PR: Universidad de Puerto Rico, Recinto de Mayagüez. 17 p.

- 2017 **López Marrero, T.**, M.A. Lorenzo Pérez, C.F. Rivera López, A.C. González Toro, D.J. Rivera Santiago, H.I. Nieves Crespo and P.N. Hernández González. *Porto Rico 1930 Georeferenced: A Coastal Mosaic*. Interdisciplinary Center for Coastal Studies. Mayagüez, PR: University of Puerto Rico, Mayagüez Campus. 15 p.
- 2016 Arrocho Barreto, A., R.A. González-Arango López, K. Sánchez Vázquez, I.R. Rosa Nieves y **T. López Marrero**. *Cartografía de unas elecciones: Puerto Rico, 2016*. Departamento de Ciencias Sociales. Mayagüez, PR: Universidad de Puerto Rico, Recinto de Mayagüez. 27 p.
- 2016 **López-Marrero, T.** y O. Acevedo Muñiz. *Dinámicas poblacionales en los municipios costeros de Puerto Rico: 1980 al 2015*. Centro Interdisciplinario de Estudios del Litoral. Mayagüez, PR: Universidad de Puerto Rico, Recinto de Mayagüez. 78 p.
- 2016 **López-Marrero, T.** Cambio del paisaje de La Parguera entre 1930 y 2010: El caso de las estructuras construidas y los manglares. *Revista Marejada* 14(1):16-23.
- 2015 **López-Marrero, T.**, H.I. Nieves-Crespo, B. Morales-Muñoz and Monique Lorenzo Pérez. *CariCOOS Ocean Observation System Needs Assessment*. Technical report submitted to CariCOOS Ocean Observation System, University of Puerto Rico – Mayagüez. 24p.
- 2015 **López-Marrero, T.** *Landscape transformation, exposure and vulnerability to coastal hazards in Northern Puerto Rico*. Research report submitted to the University of Puerto Rico Sea Grant Program. 16p.
- 2014 **López-Marrero, T.** *Introducción a la cartografía temática*. Centro Interdisciplinario de Estudios del Litoral. Mayagüez, PR: Universidad de Puerto Rico, Recinto de Mayagüez. 5 p.
- 2012 **López-Marrero, T.**; Hermansen-Báez, L.A.; and McDaniel, Josh. *Tools for Building Understanding and Promoting Dialogue*. Case Study for “Changing Roles: WUI Professional Development Program.” Gainesville, FL: USDA Forest Service, Southern Research Station. 5 p.
- 2011 **López-Marrero, T.**; Hermansen-Báez, L.A. *Participatory Listing, Ranking, and Scoring Ecosystem Services and Drivers of Change*. [Guide]. Gainesville, FL: USDA Forest Service, Southern Research Station. 8 p.
- 2011 **López-Marrero, T.**; Hermansen-Báez, L.A. *Participatory Mapping of Land Cover Change*. [Guide]. Gainesville, FL: USDA Forest Service, Southern Research Station. 8 p.
- 2011 **López-Marrero, T.**; González-Toro, A.; Heartsill-Scalley, T., Hermansen-Báez, L.A. *Multi-Criteria Evaluation and Geographic Information Systems for Land-Use Planning and Decision Making*. [Guide]. Gainesville, FL: USDA Forest Service, Southern Research Station. 8 p.

- 2011 **López-Marrero, T.**; Meyn, M.; Hermansen-Báez, L.A. *Landowner Incentives for Conservation around El Yunque National Forest*. [Fact sheet]. Gainesville, FL: USDA Forest Service, Southern Research Station. 4 p.
- 2011 **López-Marrero, T.**; Hermansen-Báez, L.A. *Land cover within and around El Yunque National Forest*. [Fact sheet]. Gainesville, FL: USDA Forest Service, Southern Research Station. 4 p.
- 2011 **López-Marrero, T.**; Hermansen-Báez, L.A. *Expansion of Urban Land Cover around El Yunque National Forest*. [Fact sheet]. Gainesville, FL: USDA Forest Service, Southern Research Station. 4 p.
- 2011 **López-Marrero, T.**; Hermansen-Báez, L.A. *Urbanization Trends and Zoning around El Yunque National Forest*. [Fact sheet]. Gainesville, FL: USDA Forest Service, Southern Research Station. 4 p.
- 2011 **López-Marrero, T.**; Balloffet, N.M.; Nieves-Crespo, H.I.; Meyn, M. *Karst Forests and their Benefits: A Comparison between Local and Expert Knowledge*. [ConoBosque Briefing]. San Juan, PR: Misión Industrial de Puerto Rico. 8 p.
- 2011 **López-Marrero, T.**; Meyn, M.; Nieves-Crespo, H.I.; Morales-López, R.; Nieves-Rodríguez, E.; Balloffet, N.M. *Public Knowledge and Perceptions about Karst Forests*. [ConoBosque Briefing]. San Juan, PR: Misión Industrial de Puerto Rico. 10 p.
- 2011 **López-Marrero, T.**; Meyn, M.; Nieves-Crespo, H.I.; Morales-López, R.; Balloffet, N.M. *Public Knowledge and Perceptions about Urban Forests in a Watershed Context*. [ConoBosque Briefing]. San Juan, PR: Misión Industrial de Puerto Rico. 11 p.
- 2010 **López-Marrero, T.** *Stakeholders's Perceptions of the Negative Drivers of Ecosystem Change: the Case of El Yunque National Forest, Puerto Rico*. In Laband, D.N., editor. *Emerging Issues along the Urban/Rural Interfaces III: Linking Science and Society*. Atlanta, GA.
- 2010 **López-Marrero, T.** and M. Meyn. *Landowners' Incentives for Forest Conservation around El Yunque National Forest: Obstacles and Opportunities*. In Laband, D.N., editor. *Emerging Issues along the Urban/Rural Interfaces III: Linking Science and Society*. Atlanta, GA.
- 2010 Curet Cuevas, E., **T. López-Marrero, J.** Alvarado, and I.P. Godreau. *Análisis de las características demográficas, sociales, económicas y de la vivienda de la región de servicio de la Universidad de Puerto Rico en Cayey: 1980 al 2000*. Cuadernos del Instituto de Investigaciones Interdisciplinarias, 12. Universidad de Puerto Rico, Cayey.

- 2004 Lugo, A.E., **T. López-Marrero**, O.M. Ramos González, and L. Vélez. *Urbanización de los terrenos en la Periferia de El Yunque*. General Technical Report WO-66. USDA Forest Service, Washington, DC.
- 2001 Lugo, A.E., L. Miranda, A. Vale, **T. López-Marrero**, E. Hernández, A. García, A.R. Puente, A.G. Tossas, D.A. McFarlane, T. Miller, A. Rodríguez, J. Lundberg, J.R. Thomlinson, J. Colón, J.H. Schellekens, O.M. Ramos González, and E. Helmer. *Puerto Rican Karst: A Vital Resource*. General Technical Report WO-65. International Institute of Tropical Forestry, USDA Forest Service, San Juan, Puerto Rico.
- 2000 Lugo, A.E., **T. López-Marrero**, O.M. Ramos González. *Zonificación de terrenos en la Periferia del Yunque*. General Technical Report IITF-16. International Institute of Tropical Forestry, USDA Forest Service, San Juan, Puerto Rico.
- 1999 **López-Marrero, T.** and O.M. Ramos González. *Mapa de zonificación especial para las zonas no urbanas de los municipios circundantes al Bosque Nacional del Caribe*. International Institute of Tropical Forestry, USDA Forest Service, San Juan, Puerto Rico (Map publication)

PRESENTATIONS

Invited:

- 2019 López Marrero T. *Proyecto Puerto Rico Georeferenciado*. GIS DAY. Universidad Central de Bayamón. Bayamón, PR. 13 de noviembre.
- 2019 Panelista invitada en la presentación del libro *Calentamiento Global: La huella humana*, del Dr. Rafael Méndez Tejeda. Museo Casa Pilar Defilló, Mayagüez, PR. 29 de octubre; con Wilson Ramírez, Ruperto Chaparro and Fernando Gilbes.
- 2019 López Marrero T. y Castro Rivera, A. *Proyecto1867: Promoviendo el conocimiento y conservando la memoria de desastres en Puerto Rico*. Presentación como parte de las actividades de la Semana de la Biblioteca del Recinto de Ciencias Médicas. Universidad de Puerto Rico, Recinto de Ciencias Médicas. 16 de mayo.
- 2019 Participant on Panel *Resiliencia: Una conversación entre disciplinas*. University of Puerto Rico, Río Piedras Campus. March 26; with Marcel Castro Sitiriche and Ariel E. Lugo.
- 2018 Discussant on Panel “*What are the benefits of science education to Puerto Rican society?*” as part of the *30:75:100 - The Stoichiometry of Research, Education, and Conservation in Puerto Rico*. University of Puerto Rico, Río Piedras Campus. Panel discussion. December 8.
- 2018 *150 años de actividad ciclónica: Desastres y memoria en Puerto Rico*. Institute of Caribbean Studies. University of Puerto Rico, Río Piedras Campus, Río Piedras, San Juan, Puerto Rico. October 29; with A. Castro Rivera.

- 2018 *Proyecto 1867: Desastres y memoria en Puerto Rico*. Ciclo de conferencias del Centro Interdisciplinario de Estudios del Litoral. University of Puerto Rico, Mayagüez Campus. September 20; with: A. Castro Rivera, C.F. Rivera López and M.A. Lorenzo.
- 2018 *Georeferencing Puerto Rico's 1930 coastal aerial photography*. Sea Grant College Program Advisory Committee Meeting. International Institute of Tropical Forestry, San Juan, Puerto Rico. June 28.
- 2018 *Huracanes y bosques en Puerto Rico y las Antillas Mayores: ¿Qué nos dice un siglo de investigaciones ecológicas?* Caribbean Conferences 22. Institute of Caribbean Studies. University of Puerto Rico, Río Piedras Campus, Río Piedras, San Juan, Puerto Rico. March 19; with T. Heartsill Scalley, C.F. Rivera López, I.A. Escalera García, and M. Echevarría Ramos.
- 2018 *Huracanes y bosques en Puerto Rico: ¿Qué sabemos y qué nos falta por saber?* Ciclo de conferencias del Centro Interdisciplinario de Estudios del Litoral. University of Puerto Rico, Mayagüez Campus. March 15; with: C.F. Rivera López, I.A. Escalera García, M. Echevarría Ramos and T. Heartsill Scalley.
- 2018 *Amenazas naturales, desastres y memoria en Puerto Rico*. Simposio de Investigación y Labor Creativa del Colegio de Artes y Ciencias. University of Puerto Rico, Mayaguez Campus, Mayaguez, Puerto Rico. February 23.
- 2018 Invited discussant on Conference “*In the Shadow of Flora and Katrina: Response to Hurricanes Irma and Maria in the Neoliberal Age*”, by S.B.Schwartz. Caribbean Conferences Series, Institute of Caribbean Studies, University of Puerto Rico, San Juan, Puerto Rico. February 8.
- 2016 *Islas y archipiélagos: Repensando el Caribe desde una perspectiva interdisciplinaria*. Ciclo de Conversatorio del Centro de Investigaciones Históricas. University of Puerto Rico, Rio Piedras Campus, San Juan Puerto Rico. November 18 (with Yolanda Martínez San Miguel, Rutgers University).
- 2016 *Sistemas socio-ecológicos y manejo de recursos naturales*. Policy and Management Workshop. Laboratorio Marino Isla Magueyes, Lajas, Puerto Rico. June 23.
- 2016 *Cambio en cobertura de terreno en el Bosque Seco de Guánica y sus áreas circundantes*. Segundo Simposio de Bosques Secos de Guánica. Centro de Visitantes, Bosque de Guánica, Guánica, Puerto Rico. January 28.
- 2015 *Reducción de vulnerabilidad y aumento de capacidad de adaptación y resiliencia a riesgos costeros: de la teoría a la práctica*. Ciclo de conferencias del Centro Interdisciplinario de Estudios del Litoral. University of Puerto Rico, Mayagüez Campus. March 24.
- 2013 Discussant on Panel “*What Does Climate Change Indicate For Future Vulnerability of Natural and Social Systems?*” as part of the Conference *Bridging the Climate Divide: Informing the Response to Hurricane Sandy and Implications for Future Vulnerability*.

- Rutgers Climate Institute Conference Series. Rutgers University, New Brunswick, New Jersey. Panel discussion. October 14.
- 2013 *"Get Up, Stand Up": Environmental Situation, Threats, and Opportunities in the Insular Caribbean*. Caribbean Conferences 13. Institute of Caribbean Studies. University of Puerto Rico, Río Piedras Campus, Río Piedras, San Juan, Puerto Rico. Panel discussion, with Tamara Heartsill Scalley, Félix Aponte Martínez, Ruperto Chaparro Serrano, and Nancy Villanueva Colón. August 22.
- 2013 *El Yunque Ecosystem Services: A Participatory Research Approach*. Ecosystems Services Workshop, Coordinated by El Yunque National Forest and the Puerto Rico's Department of Natural and Environmental Resources, San Juan, Puerto Rico. June 25.
- 2012 *From vulnerability to capacities and resilience building: the case of flood-prone communities in Puerto Rico*. Brown Bag Speaker Series, Department of Human Ecology, Rutgers University. October 17.
- 2012 *Ecosystem services, social learning and conservation in Puerto Rico*. Urban Natures Workshop. Rutgers University, New Brunswick, New Jersey. Panel discussion. October 5.
- 2011 *Beneficios de los bosques del carso: comparación entre la percepción de residentes y expertos*. 1^{er} Simposio sobre educación, interpretación ambiental e Investigación en bosques y áreas protegidas. Centro Ambiental Santa Ana, Bayamón, Puerto Rico. March 4.
- 2011 *Land cover change around El Yunque National Forest*. Spring 2011 course Place-Based Landscape Analysis – University of Vermont, Rubenstein School of Environment and Natural Resources. El Verde Research Station, Río Grande, Puerto Rico. March 11.
- 2010 *From Theory to Practice: Building Resilience in Low income-Urban Communities in Puerto Rico*. Caribbean Cities Getting Ready Workshop. Santo Domingo, DR. August 4-6.
- 2009 *Conservación de los servicios ecológicos y sociales de las áreas protegidas: la importancia de la inclusión de múltiples actores*. First Working Meeting for the El Yunque National Forest Hydrology for the Environment, Life and Policy (HELP) UNESCO Initiative. El Yunque National Forest, Río Grande, Puerto Rico. March 26.
- 2008 *Una mirada a la situación ambiental en Puerto Rico*. November 14, 2008. Ciclo de conferencias magistrales de la Escuela de Ciencias Sociales y Humanas. Universidad del Turabo, Gurabo, Puerto Rico. November 14.

- 2008 *¿Por qué y para qué es urgente la educación ambiental?: Utilidad de los libros “Climatología de Puerto Rico” y “Atlas Ambiental de Puerto Rico.”* 14^{ta} Conferencia Anual del College Board: Agenda ciudadana para una educación transformadora. San Juan, Puerto Rico. October 10.
- 2008 *Atlas geográficos: herramientas indispensables en el análisis y el conocimiento de regiones.* 5^{to} Aniversario de Fundación del Centro Cultural Eduardo León Jimenes: Presentación de la Mapoteca y del Atlas Digital del Caribe. Santiago, República Dominicana. October 3.
- 2008 *Investigación participativa y métodos visuales en Geografía.* March 6, 2008. Ciclo de seminarios del Instituto de Investigaciones Interdisciplinarias. University of Puerto Rico, Cayey Campus, Cayey, Puerto Rico. March 6.
- 2007 *Adaptación a riesgos naturales en el Caribe: comunidades expuestas a inundaciones en Puerto Rico.* Caribbean Conferences 1. Institute of Caribbean Studies. University of Puerto Rico, Río Piedras Campus, Río Piedras, San Juan, Puerto Rico. November 1.
- 2005 *Uso de terreno y recursos de agua en la región noreste de Puerto Rico.* Primer Diálogo sobre Agua e Higiene en la Sierra de Luquillo. Internacional Institute of Tropical Forestry, San Juan, Puerto Rico. August 24.
- 2003 *Usos de suelo y zonificación de terrenos en la periferia de El Yunque.* Segundo Encuentro de Sistemas de Información Geográfica para la Autonomía Municipal. Carolina, Puerto Rico. November 21.
- 2003 *Introduction to Puerto Rico’s Physical Geography and the Human Influences on the Island’s Environment.* Council on Latin American and Iberian Studies, Yale University: “Portraits of Contemporary Puerto Rican Communities”. San Juan, Puerto Rico. July 14.

Professional Meetings:

- 2019 Huracanes y bosques en Puerto Rico: ¿Qué nos dice un siglo de investigaciones ecológicas? 1er Congreso de Geografía Eugenio María de Hostos. San Juan, PR, 1-3 de noviembre.
- 2019 Hurricanes and forests in Puerto Rico: A systematic literature review. Association of American Geographers Annual Meeting. Washington, D.C. April 3-7. Poster presentation, Co-authored with T. Heartsill Scalley, C.F. Rivera López, I.A. Escalera García and M. Echevarría Ramos.

- 2017 *Porto Rico 1930 Georeferenced: A Coastal Mosaic*. 15^{ta} Reunión Nacional de Percepción Remota y SIG de Puerto Rico. University of Puerto Rico, Mayagüez Campus, Mayagüez, Puerto Rico. December 8.
- 2016 *Ocean Observation System Needs Assessment: Transferring Data to Practice*. CariCOOS 2016 General Assembly. Puerto Rico Convention Center. San Juan, Puerto Rico. April 27-28. Poster presentation, third author, co-author with Hedy I. Nieves Crespo (presenter) and Berliz Morales.
- 2015 *Visualización de cambios en la costa de Puerto Rico*. 13^{ma} Reunión Nacional de Percepción Remota y SIG de Puerto Rico. University of Puerto Rico, Mayagüez Campus, Mayagüez, Puerto Rico. October 9. Presenter, co-author with Monique Lorenzo Pérez, Paola Hernández González, and Hedy Nieves Crespo.
- 2015 *Visualizing the Puerto Rican Coast in 1930*. 30th Annual UPRM Geology Symposium. University of Puerto Rico, Mayagüez Campus. April 14. Poster presentation, first author, co-author with Paola Hernández González and Monique Lorenzo Pérez (presenters).
- 2014 *Multi-criteria evaluation and Geographic Information Systems for land-use planning and decision making*. 12^{ma} Reunión Nacional de Percepción Remota y SIG de Puerto Rico. University of Puerto Rico, Mayagüez Campus, Mayagüez, Puerto Rico. September 12. Presenter, co-author with Antonio González Toro.
- 2014 *Caribbean hazards and disasters: research trends over the last three decades*. Association of American Geographers Annual Meeting. Tampa, FL. April 8-12.
- 2014 *Hurricanes and Memory in the Insular Caribbean: Implications for Hazard Management?* Association of American Geographers Annual Meeting. Tampa, FL. April 8-12. Co-authored with Hedy I. Nieves (presenter).
- 2012 *El Yunque Ecosystem Services: a participatory research approach*. 14th Caribbean Urban and Community Forestry Conference. Saint Thomas, USVI. October 25-26. Poster presentation, second author, co-author with Annie Hermansen-Báez (presenter) and Edward Macie.
- 2012 *Enhancing resilience to floods in the Caribbean*. Association of American Geographers Annual Meeting. Washington, DC. February 24-28.
- 2012 *Easements for conservation of privately-owned forests along the rural-urban fringe: obstacles and opportunities*. Association of American Geographers Annual Meeting. Washington, DC. February 24-28.

- 2012 *Public knowledge and perceptions about karst forests: using environmental interpretation as a tool to connect people with forests.* Association of American Geographers Annual Meeting. Washington, DC. February 24-28. Second author, co-author with Eliezer Nieves (presenter).
- 2010 *Ecosystem services and drivers of ecosystem change: a comparison among stakeholders.* Association of American Geographers Annual Meeting. Washington, DC. April 15-18. Poster presentation.
- 2010 *Landowner incentives for forest conservation around El Yunque National Forest: opportunities and limitations.* Emerging Issues along the Urban-Rural Interfaces 3. Atlanta, GA. April 11-14.
- 2010 *Stakeholders' perceptions of the negative drivers of ecosystem change: the case of the lands within and around El Yunque National Forest.* Emerging Issues along the Urban-Rural Interfaces 3. Atlanta, GA. April 11-14.
- 2010 *Mainstreaming conservation and human well-being.* Emerging Issues along the Urban-Rural Interfaces 3. Atlanta, GA. April 11-14. Poster presentation, second author, co-author with Hedy I. Nieves (presenter).
- 2008 *El uso de metodología participativa en el estudio de vulnerabilidad a riesgos naturales.* 33th Annual Caribbean Studies Association Conference. San Andrés, Colombia. May 26-30.
- 2008 *La integración de los riesgos naturales en el contexto de múltiples riesgos en comunidades expuestas a inundación.* First Annual Academic Conference "Trascendiendo Fronteras". University of Puerto Rico, Río Piedras Campus, San Juan, Puerto Rico. March 27.
- 2007 *From Theory to Practice: Enhancing Resilience of Flood-Prone Communities in Puerto Rico.* Association of American Geographers Annual Meeting. San Francisco, California. April 19.
- 1999 *Urbanization of Prime Farmlands in Puerto Rico: 1977-1994.* Tropical Restoration for the New Millennium International Conference. San Juan, Puerto Rico. May 23-28 (Poster presentation)
- 1999 *Urbanización de suelos agrícolas en Puerto Rico: 1977-1994.* Tropical Geography Congress – Trópico '99. La Habana, Cuba. March 29-April 2.

FUNDED RESEARCH AND PROJECTS

- 2017-2022 *A Participatory Approach to El Yunque Ecosystem Services: Ten Years Later.* USDA Forest Service, Centers for Urban and Interface Forestry, Southern Research Station. **Principal Investigator.** \$71,716.
- 2017-2018 *A Geographic Perspective of the Coastal Resources on Puerto Rico in the aftermath of Hurricane Maria.* University of Puerto Rico Sea Grant Program. **Project Director.** \$11,927.
- 2017-2019 *Promoting Natural Disasters' Social Memory for Community Resilience.* University of Puerto Rico Sea Grant Program. **Principal Investigator.** \$15,000.
- 2016-2017 *Georeferencing Puerto Rico's 1930 Coastal Aerial Photography.* Puerto Rico's Department of Natural and Environmental Resources. **Project Director.** \$28,350.
- 2013 *Caribbean Environmental Mapping Initiative.* Rutgers University, CLAS Small Grant Fund for research on Latin America. **Project Director.** \$600.00
- 2012-2014 *Promoting Community Adaptation and Resilience in the Insular Caribbean (PROCARIB Working Group).* Rutgers University, Office of the Vice President for International and Global Affairs – Working Groups in Global and International Research. **Project Director.** \$10,000.
- 2012-2013 *Urban expansion and natural hazards in Puerto Rico.* Rutgers University, Research Council Grant. **Principal Investigator.** \$2,500.
- 2012 *Re-mapping the Insular Caribbean: Visualizing and interpreting environmental data through cartograms.* Rutgers University, Critical Caribbean Studies Initiative. **Project Director.** \$1,000.
- 2012-2014 *Landscape Transformations and Vulnerability to Coastal Hazards in Puerto Rico.* National Oceanic and Atmospheric Administration, Sea Grant Program, University of Puerto Rico at Mayagüez. **Principal investigator;** in collaboration with Instituto de Ciencias para la Conservación de Puerto Rico. \$46,418.
- 2009-2011 *Public Knowledge and Perception of Forest Ecosystems Services and Drivers of Ecosystem Change: the Case of the Northern Karst and the Río Piedras Watershed, Puerto Rico.* USDA Forest Service, International Institute of Tropical Forestry, Urban and Community Forestry. **Principal Investigator;** in collaboration with Misión Industrial de Puerto Rico. \$61,527.
- 2008-2010 *Integrating Landscape Attributes, Ecosystem Services, and Stakeholder Perceptions and Incentives for Determining Land Use Suitability for Conservation.* USDA Forest Service, Centers for Urban and Interface Forestry,

Southern Research Station. **Principal Investigator**; in collaboration with the University of Puerto Rico and the USDA Forest Service International Institute of Tropical Forestry. \$264,754.

FELLOWSHIPS AND AWARDS

- 2018 Sloan Scholar Mentoring Network Traveling Grant (\$1,443)
- 2017 Dedication of the XXIV Symposium of Undergraduate Research in the Social Sciences
- 2005 Sloan Fellowship. Alfred P. Sloan Foundation Program to Increase the Number of Underrepresented Minority Students Receiving PhD's in Mathematics, Science and Engineering.
- 2005 Earth and Mineral Sciences Centennial Graduate Research Award. The Pennsylvania State University, University Park, PA
- 2004-05 PhD. Bunton Waller Graduate Award. Fellowships and Award Office, The Pennsylvania State University, University Park, PA
- 2000-02 Graduate Fellowship. President's Office, University of Puerto Rico, San Juan, PR
- 2000-01 MSc. Bunton Waller Graduate Award. Fellowships and Award Office, The Pennsylvania State University, University Park, PA

TEACHING

University of Puerto Rico – Mayagüez Campus:

GEOG 3155: Human Geography

GEOG 3185: Physical Geography

SOCI 3265: Research Methods in the Social Sciences

SOCI 3276: Sociological Writing and Documentation

SOCI 3305: Principles of Population

SOCI 3007: Environmental Sociology

SOCI 4006: Special Topics in Sociology (Topic: GIS for Social Sciences)

SOCI 4991/PAIS: Programa de Adiestramiento en Investigación Subgraduada

SOCI 5008: Sociology of Disasters

University of Puerto Rico – Río Piedras Campus:

GEOG 3100: Elements of Geography

GEOG 3250: Introduction to Statistical Methods in Geography

GEOG 3475: Introduction to Geographic Information Systems

GEOG 3705: Cartography and Map Design
GEOG 3825: Thematic Cartography
GEOG 4055: Aerial Photography Interpretation
PREH 4676: Resilience of Social-Ecological Systems (Honors Seminar)

Rutgers University:

GEOG 01:450:335: Caribbean Borderlands
GEOG 01:450:208: Maps and Map Reading
LHCS 01:595:314: Caribbean Natural Disaster
LHCS 01:595:280: Introduction to Caribbean Geography

The Pennsylvania State University (Courses assisted and laboratory taught):

GEOG 10: Introduction to Physical Geography
GEOG 115: Landforms of the World
GEOG 361: Maps and Maps Constructions
GEOG 364: Spatial Analysis

Workshops offered:

Técnicas de muestreo en la investigación social. Ciclo de talleres del Centro Interdisciplinario de Estudios del Litoral. University of Puerto Rico, Mayagüez Campus. October 11, 2016.

Mapas participativos. Ciclo de talleres del Centro Interdisciplinario de Estudios del Litoral. University of Puerto Rico, Mayagüez Campus. October 6, 2015.

Introducción a la cartografía temática. Ciclo de talleres del Centro Interdisciplinario de Estudios del Litoral. University of Puerto Rico, Mayagüez Campus. September 26, October 10 and October 24, 2014.

SERVICE

SERVICE TO PROFESSION

Committees:

Member. National Oceanic and Atmospheric Administration Cooperative Science Center for Earth System Sciences and Remote Sensing Technologies (NOAA-CESRST) Social Science Sub-Committee (2019 – present)

Conferences and Panels organization:

2014 Co-organizer (with Robin Leichenko), 7th MaGrann Conference, “The Caribbean at Risk: From Hazard Adaptation to Societal Transformation”, Rutgers University, New Brunswick, NJ

- 2014 Co-organizer (with April Baptiste and Kevon Rhiney) and Chair “Climate Justice and Hazards Adaptation in the Caribbean: Part 2”, Association of American Geographers Annual Meeting, Tampa, FL
- 2014 Co-organizer (with April Baptiste and Kevon Rhiney), “Climate Justice and Hazards Adaptation in the Caribbean: Part 1”, Association of American Geographers Annual Meeting, Tampa, FL
- 2012 Co-organizer (with David Barker) and Chair, “Caribbean vulnerabilities and global change: from coping strategies to resilience building”, Association of American Geographers Annual Meeting, New York

Editorial Board (Member):

- Acta Científica (2019 – present)
Caribbean Studies (2018 – present)
Caribbean Geography (2014 – present)

Manuscript reviewer for:

Environmental Justice (2018), Community Development (2017), Caribbean Naturalist (2015), Acta Científica (2015), Ambio (2015), Caribbean Studies (2018, 2017, 2016, 2010, 2018), Geoforum (2014), Disaster Prevention and Management: An International Journal (2014), Area (2014, 2013), Cartographica (2013), Global Environmental Change (2013), Journal of Environmental Policy and Planning (2013), Journal of Latin American Geography (2013), Geography Compass (2013, 2013, 2012), Revista de Ciencias Sociales (2012), Journal of Environmental Management (2012), British Journal of Environment and Climate Change (2011), Conservation and Society (2011), Ecology and Society (2010, 2009), Caribbean Journal of Science (2007)

Proposal reviewer for:

National Endowment for the Humanities Summer Stipend Pre-proposal Review. Faculty of Arts and Sciences, University of Puerto Rico, Mayaguez, Campus (2018)
Fondo Institucional para la Investigación, University of Puerto Rico, Río Piedras Campus (2018)
University of Puerto Rico Sea Grant College Program (2013)
National Geographic Society (2010)

Map reviewer for:

USDA Forest Service, International Institute of Tropical Forestry (2012)

SERVICE TO THE UNIVERSITY OF PUERTO RICO

Department of Social Sciences:

2014-present Director, Interdisciplinary Center for Coastal Studies

Aug 2019-present Coordinator, Curricular Sequence in Sociology and Environmental Public Policy
Aug 2018-present Member, Curriculum Committee
Jan 2016-present Member, Committee of Research Spaces
Aug 2016-May 2018 Mentor, Association of Sociology Students
Jan - May 2016 Member, Departmental Appraisal Committee
Ago 2015-May 2016 Coordinator, Sociology Program

University at large:

2015-2016 Associate Director, Sea Grant College Program

SERVICE TO RUTGERS UNIVERSITY

Department of Geography:

2012-14 Department of Geography Speaker Series Coordinator
2013 Member, Faculty Search Committee for Instructor position
2012 Member, Graduate Program Admission Committee

Department of Latino and Hispanic Caribbean Studies:

2012 New course development: 01:595:314: Caribbean Natural Disaster
2011-12 Member, Curriculum Committee

University at large:

2012-14 Faculty Website Liaison, Critical Caribbean Studies at Rutgers
2013-14 Executive Committee Board representative, Critical Caribbean Studies at Rutgers
2013-14 Convener, "Archipelagic Studies and Creolization" cluster, Critical Caribbean Studies at Rutgers

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