

# VITA

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## **EDUCATION:**

- 2004 Licensee in Biology, University of Zulia, Maracaibo, Venezuela (BSc equivalent plus thesis/dissertation)
- 2010 Ph.D. In Earth & Atmospheric Sciences. Department of Earth & Atmospheric Sciences, University of Alberta, Canada.

## **PROFESSIONAL EXPERIENCE:**

- 2004-2005 GIS/Remote Sensing Analyst, Environmental NGO 'Provita', Caracas Venezuela.
- 2010-2013 Associate Researcher, Laboratory of Arid and Semi-Arid Zones, Center for Botanical and Agroforestry Studies, Venezuelan Institute of Scientific Research, Maracaibo, Venezuela.
- 2013-2014 Postdoctoral Fellow, Center of Earth Observation Sciences, University of Alberta, Edmonton, Canada.
- 2014- Present Assistant Professor, Department of Natural Resources Management, Texas Tech University.

## **LICENSES AND CERTIFICATIONS:**

- 2002 Certificate in "Geographic Information Systems using ArcView". Short-course. IMPRADEM. Mérida, Venezuela.
- 2002 Certificate in "Project Design and Analysis for Biodiversity Management". Hato El Cedral, Apure State, Venezuela. Workshop organized by PROVITA, Conservation International and the Center of Ecology, Venezuelan Institute for Scientific Research. Venezuela.
- 2004 Certificate in "Effective Lectures for Managers". Offered by Institute of Superior Studies in Administration (IESA). Maracaibo, Venezuela.
- 2007 Certificate in "Trends in Biodiversity: European ecosystems and policy". Workshop organized by the Potsdam Institute for Climate Impact Research. Peyresq, Alpes-Haute-Provence, France.

## **INTERNATIONAL EXPERIENCE: (Career)**

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|----------------|--|
| 2007-2008      | PhD thesis Fieldwork in Brazil, Panama and Venezuela (8 months duration in total).   |
| 2013-2014      | Postdoctoral fieldwork conducted in tropical dry forests in Guanacaste Conservation Area, Costa Rica and Boreal Forests in Northern Alberta, Canada. |
| 2019 - Present | External Graduate Student Advisor & Research Collaborator. Department of Natural Resources. Center for Scientific Research of Yucatan, Mexico.       |

## **MEMBERSHIP IN PROFESSIONAL AND HONORARY SOCIETIES:**

### Professional:

1. Ecological Society of America; 2015 to present.
2. International Union for the Conservation of Nature (IUCN), Commission on Ecosystem Management; 2017 to present.
3. Global Land Programme; 2017 to present.

## **HONORS AND AWARDS:**

### Honors:

1. STEM Teaching, Engagement & Pedagogy (STEP) Fellowship, Texas Tech University, University. (September 1, 2016).

### Awards:

1. 2007 J Gordin Kaplan Award. Faculty of Graduate Studies and Research, University of Alberta, Canada.
2. 2006 Eugene Brody Scholarship in recognition of academic excellence as a graduate student. Faculty of Graduate Studies and Research, University of Alberta, Canada.
3. 2006 Vega Graduate Scholarship in recognition of academic excellence as a graduate student. Faculty of Graduate Studies and Research, University of Alberta, Canada.
4. 2006 Graduate Teaching Assistant Award in recognition of excellence in teaching as a graduate student. University Teaching Services, University of Alberta, Canada.

**AREA OF EXPERTISE:** Ecosystem Monitoring, Geographic Information Systems, Remote Sensing.

## **PUBLICATIONS<sup>1,2</sup>:**

### **Book Chapters: total of 10**

1. Chong, M. M., K. Dutchak, J. Gamon, Y. Huang, M. Kalácska, D. Lawrence, **C. Portillo-Quintero**, J. P. Rodríguez y A. Sánchez-Azofeifa (2008) Remote Sensing. Páginas 47- 80 En: J. M. Nassar, J. P. Rodríguez, A. Sánchez-Azofeifa, T. Garvin y M.

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<sup>1</sup> TTU graduate students with an asterisk (\*).

<sup>2</sup> Name of Tenure Applicant in **bold**.

Quesada, editores. Manual of Methods: Human, Ecological and Biophysical Dimensions of Tropical Dry Forests. Ediciones IVIC, Instituto Venezolano de Investigaciones Científicas (IVIC), Caracas, Venezuela.

2. Wright, SJ, HC Muller-Landau, GA Sanchez-Azofeifa, **C. Portillo-Quintero** and D Davies. (2009). The future of Southeast Asian forests and their species. Pages 91-104 in N. Stacey, B. Campbell, G. Boggs and W. Steffen, editors. Prepare for impact: When people and the environment collide in the tropics. Charles Darwin University Press, Darwin, Australia.
3. **Portillo-Quintero, C**, Lacabana, P. Carrasquel, F. (2010) Study Case: Conversion trends of tropical forests of the Venezuelan Central Cordillera. Red Book of Venezuelan Ecosystems. Asociación Civil PROVITA. Pp 239-244. Caracas, Venezuela.
4. Hernández, M. & **Portillo-Quintero, C**. (2010) Study Case: Conversion trends of the tropical forests of northern Perija mountains. Red Book of Venezuelan Ecosystems. Asociación Civil PROVITA. Pp 257-262. Caracas, Venezuela.
5. Sanchez-Azofeifa, G.A. & **Portillo-Quintero, C**. (2011) Extent and Drivers of Change of Neotropical Dry Forest. Pages 45-57 in Dirzo, R., Mooney, H & Ceballos, G. Eds. Seasonally Dry Tropical Forests. Stanford University Centre for Latin American Studies and Universidad Autonomy de Mexico. Standford University Press.
6. Calvo-Alvarado J. C., Sánchez-Azofeifa G. A., and **Portillo-Quintero C**. (2013). Neotropical Seasonally Dry Forests. In: Encyclopedia of Biodiversity. (2nd ed.). Levin S. (Ed.), pp.488–500. Academic Press, Princeton University, New Jersey
7. Lehman SM, Vié J-C, Norconk MA, **Portillo-Quintero C**, Urbani B. (2013). The Guyana Shield: Venezuela and the Guyanas. In: Veiga LM, Barnett AA, Ferrari SF, Norconk MA, editors. Evolutionary biology and conservation of titis, sakis and uacaris. Cambridge: Cambridge University Press. p 311–319.
8. Yumi Oki, Arturo Sánchez-Azofeifa, **Carlos Portillo-Quintero**, Payri Yamarte-Loreto, and Geraldo Wilson Fernandes. (2014) Carbon Dioxide Enrichment Effects in the Spectral Signature of Lianas and Tree Species from Tropical Dry Forests. In: Tropical Dry Forests in the Americas: Ecology, Conservation and Management (First Edition ed.). CRC Press.
9. **Portillo Quintero, C.**, Sanchez, A., Espirito-Santo, M. (2014). Edge Influence on canopy openness and understory microclimate in two neotropical dry forest fragments. In: Tropical Dry Forests in the Americas: Ecology, Conservation and Management (First Edition ed.). CRC Press.
10. Urbani B & **C Portillo-Quintero** (2018) Considerations about the distribution and conservation of primates of the Venezuelan Guayana. (Consideraciones sobre la distribución y estado de conservación de los primates de la Guayana venezolana). In: Urbani B, Kowalewski M, Cunha RGT, de la Torre S & L Cortés-Ortiz (eds.) La primatología en Latinoamérica 2 – A primatologia na America Latina 2. Tomo II

Costa Rica-Venezuela. Ediciones IVIC. Instituto Venezolano de Investigaciones Científicas (IVIC). Caracas, Venezuela. Pp. 677-689.

**Refereed Journals:**

**Total published: 19**

**Submitted: 1**

**Under review by co-authors: 4**

**In press: 0.**

**Published:** \* supervised or co-supervised TTU students

1. Fajardo, L., V. González, J. M. Nassar, P. Lacabana, **C. A. Portillo**, F. Carrasquel & J.P. Rodríguez (2005) Tropical Dry Forests of Venezuela: characterization and current conservation status. *Biotropica* 37:531-546. (**Impact Factor: 2.28**)
2. Wright, S.J., Sanchez-Azofeifa, G.A., **Portillo-Quintero, C.**, Davies, D. (2007) Poverty and corruption compromise tropical forest reserves. *Ecological Applications*, 17(5), 2007,pp.1259-1266. (**Impact Factor: 4.39**)
3. Rojas-Runjaic,F.; **Portillo-Quintero, C.** & Borges A. (2008) Un nuevo escorpión del género *Ananteris* Thorell, 1891 (Scorpiones, Buthidae) para la Sierra de Perijá, Venezuela. *Memorias de la Fundación La Salle*. 169:65-81. (**National journal, peer reviewed, no impact factor available**)
4. J. P. Rodríguez, J. M. Nassar, K. M. Rodríguez-Clark, I. Zager, **C. Portillo-Quintero**, F. Carrasquel, and S. Zambrano.(2008) The human dimensions of Venezuelan tropical dry forests. *Environmental Conservation* 35:311-318 (**Impact Factor: 2.29**)
5. **Portillo-Quintero C.** & Sanchez A. (2010) Extent and Conservation of tropical dry forests in the Americas. *Biological Conservation* 143:144-155. (**Impact Factor: 4.86**)
6. Avila-Cabadilla LD, Sanchez-Azofeifa GA, Stoner KE, Alvarez-Añorve MY, Quesada M, **Portillo-Quintero, CA.** (2012) Local and Landscape Factors Determining Occurrence of Phyllostomid Bats in Tropical Secondary Forests. *PLOS One* 7(4): e35228. doi:10.1371/journal.pone.0035228 (**Impact Factor: 2.76**)
7. **Portillo-Quintero, C.**, Larreal, J. Gonzalez, I., Sanchez, A. and Valbuena, C. (2012) Forest cover and deforestation patterns in the Northern Andes (Lake Maracaibo Basin): a synoptic assessment using MODIS and Landsat imagery. *Applied Geography*, 35:152-163. (**Impact Factor: 4.02**)
8. Larreal, J.T.; Rivas, G.A., **Portillo-Quintero, C.**; Barros, T. (2012) Squamata reptiles of a fragment of tropical dry forest in northwestern Venezuela (Lake Maracaibo Region). *Check List* 8 (6):1220-1224.

9. Arias, J.C., Stauffer, F. & **Portillo-Quintero, C.** (2013) Catalogo de colecciones de Palmas (Arecaceae) del estado Zulia. *Pittieria* 37:09-27 (**National journal, peer-reviewed, No Impact Factor available**)
10. **Portillo-Quintero, C.**, Sanchez-Azofeifa, G.A.; Espirito-Santo M.M. (2013) Monitoring deforestation with MODIS Active Fires in Neotropical dry forests: an analysis of local scale assessments in Mexico, Brazil and Bolivia. *Journal of Arid Environments* 97:150-159. (**Impact Factor: 2.20**)
11. **Portillo-Quintero, C.**; Sanchez-Azofeifa, A.; Culvenor, D. (2014) Using VEGNET In-Situ Monitoring Lidar (IML) to capture dynamics of Plant Area Index, structure and phenology in Aspen Parkland Forests in Alberta, Canada. *Forests*, 5(5), 1053-1068; doi:10.3390/f5051053 (**Impact Factor: 2.32**)
12. **Portillo-Quintero, C.**, Sanchez, A., Calvo-Alvarado, J., Quesada, M., Espirito-Santo, M. (2014). The Role of Tropical Dry Forests for biodiversity, water and carbon conservation in the neotropics: lessons learned. *Regional Environmental Change*, 1-11. (**Impact Factor: 2.87**)
13. Ball, A., Sanchez, A., **Portillo-Quintero, C.**, Espirito-Santo, M. (2015). Patterns of leaf biochemical and structural properties of Cerrado life forms: Implications for remote sensing. *PLOS One*. 10(2): e0117659. doi:10.1371/journal.pone.0117659 (**Impact Factor: 2.76**)
14. Stan K, Sanchez-Azofeifa A, Espirito-Santo M, **Portillo-Quintero C** (2015) Simulating Deforestation in Minas Gerais, Brazil, under Changing Government Policies and Socioeconomic Conditions. *PLOS One* 10(9): e0137911. doi:10.1371/journal.pone.0137911 (**Impact Factor: 2.76**)
15. Sanchez, A., Vega, M., Guzman, A., Campos, C., Duran, S., D'Souza, N., Gianoli, T., **Portillo-Quintero, C.**, Sharp, I. (2017). Can Terrestrial Laser Scanner (TLS) and hemispherical photographs predict Tropical Dry Forest Succession with liana abundance?. *Biogeosciences*, 14, 977-988. (**Impact Factor: 3.96**)
16. Humagain, K\*; **Portillo-Quintero, C.**; Cox, R. and Cain, J. (2017). Mapping Tree Density in Forests of the Southwestern USA Using Landsat 8 Data. *Forests* 2017, 8(8), 287; doi:10.3390/f808028716) (**Impact Factor: 2.32**)
17. **Portillo-Quintero, C** & Smith, V\*. (2018) Emerging trends of tropical dry forests loss in North & Central America during 2001–2013: The role of contextual and underlying drivers, *Applied Geography* 94:58-70, ISSN 0143-6228, <https://doi.org/10.1016/j.apgeog.2018.03.011>. (**Impact Factor: 4.02**)
18. Humagain, K\*; **Portillo-Quintero, C.**; Cox, R. and Cain, J. (2018). Estimating forest canopy cover dynamics in Valles Caldera National Preserve, New Mexico, using LiDAR and Landsat data. *Applied Geography* 99:120-132. (**Impact Factor: 4.02**)

19. Smith, V.\*; **Portillo-Quintero, C.**; Sanchez, G.A.; Hernandez-Stefanoni, J.L. (2019). Assessing the accuracy of detected breaks in Landsat time series as predictors of small scale deforestation in tropical dry forests of Mexico and Costa Rica. *Remote Sensing of Environment*. 221:707-721. (**Impact Factor: 8.89**)

**Submitted to peer-review journal:**

20. Jackson, M.\*; **Portillo-Quintero, C.**; Cox, R.; Ritchie, G.; Humagain, K.; Subedi, M. (2019, under review). Evaluating the influence of seasonality, UAV altitude and image classifier on Honey Mesquite and Yellow Bluestem mapping. Submitted to the journal of *Rangeland Ecology and Management* (Impact Factor: 1.94) in July 2019.

**Proceedings: total of 1**

**Refereed**

**Volunteered: 1**

1. Jiang, S. C. **Portillo-Quintero, C.**, A. Sanchez-Azofeifa and M. H. MacGregor, (2014) Predicting RF path loss in forests using satellite measurements of vegetation indices. Proceedings of the 39th Annual IEEE Conference on Local Computer Networks Workshops, Edmonton, AB, 2014, pp. 592-596. doi: 10.1109/LCNW.2014.6927707

**Technical reports: total of 17**

- Annual Technical and Financial Reports (Years 2015, 2016, 2017, 2018). Project title: Deforestation dynamics in Tropical Dry Forests of Central America and the Caribbean using time-series of satellite imagery. Subcontract for the University of Alberta, Canada under the 'Tropi-Dry Collaborative Research Network 3 (supported by the Inter-American Institute for Global Change Research (IAI)-US National Science Foundation Grant GEO-1128040).
- Interim and Final Report (2016). Project title: MGT, Wetland/Floodplain, Coyote Springs Salt Cedar Removal and Restoration for Natural Resources, Kirtland Air Force Base, Albuquerque, New Mexico. U.S. Army.
- Semi-annual technical reports (January & September of 2016, 2017, 2018). Project title: High-resolution image spectrometry of leaf stress and mechanical foliar damage caused by thrips in cotton seedlings. Bayer CropScience.
- Annual progress reports. (2016, 2017, 2018, 2019). Project title: Historical trends of the landscape structure of plant communities of Sand Shinnery Oak Prairie in the Southern High Plains: establishing a foundation for the restoration of lesser. USDA - NRC/Pheasants Forever.

- Trimester technical progress reports. (2018, 2019). Project title: RFP No. 209f for Endangered Species Research Projects for the Texas Kangaroo Rat. Texas Comptroller of Public Accounts.

**Other publications: total of 5**

*Popular Press articles*

June 2004. Author: Portillo, Carlos. New tools for new challenges for the conservation of the environment. Journal: La Razón-USA. Vol 2 Ed. 41 del 17 al 24 de Junio. Florida, USA.

2008. Author: Portillo, Carlos. Poverty, Corruption and Protected Areas. Journal: El Universal. Caracas, Venezuela.

March 2019. ‘Engineer: Satellite suggests fire caused Venezuela outage’. The Associated Press (AP News). Interviewed by reporter Christine Armario as an expert in remote sensing and Venezuelan affairs. Press article available at:  
<https://www.apnews.com/084df76c2f6f46568f44c850c503a30c>

March 2019. ‘Fires in Venezuela’s El Guri Complex Could Have Sparked Blackout’. The Wall Street Journal (WSJ). Interviewed by reporter Ryan Dube as an expert in remote sensing and Venezuelan affairs. Press article available at:  
<https://www.wsj.com/articles/fires-in-venezuelas-el-guri-complex-could-have-sparked-blackout-11552667168>

April 2019. CASNR News: ‘Texas Tech team assesses grassland habitat change of two native Texas reptiles’. Available online at:  
<https://www.depts.ttu.edu/agriculturalsciences/news/>

**PRESENTATIONS AND LECTURES: total of 39**

\*for supervised or co-supervised TTU students

October 2003. **Portillo Quintero, C.A.** Tropical Forests Threatened!. Ciclo de Ponencias de MBLUZ. University of Zulia, Maracaibo, Venezuela.

November 2003. **Portillo-Quintero, C.** Determination of extinction risk of the terrestrial ecosystems of Guasare, Cachirí and Socuy river basins. Centro de Ecología, Instituto Venezolano de Investigaciones Científicas. Caracas, Venezuela.

November 2003. **Portillo Quintero, C.A** & Cifuentes, N.A. Biological Corridors. Feria Científico-técnica Nacional Estudiantil 2003, ASOVAC 2003. Maracaibo, Venezuela.

April 2004. **Portillo-Quintero, C.A.** Sustainable Management of Lake Maracaibo Basin: conservation status of its forests. Forum: Descubriendo el Lago de Maracaibo. Organized by NGO “ACLAMA”. Maracaibo, Venezuela.

- July 2005. **Portillo-Quintero, C.** The Ecological footprint of Coal in the Guasare watershed, Venezuela. Biology Department, Universidad del Zulia, Maracaibo, Venezuela.
- July 2006. **Portillo-Quintero, C.** Assessing the Conservation Status of the Tropical Dry Forests of the Americas. Presented at the TROPI-DRY Working Group Meeting. Isla de Margarita, Venezuela.
- August 2006. **Portillo-Quintero, C;** Sanchez-Azofeifa & Wright, J. The threat of fire to the terrestrial ecosystems of Lake Maracaibo Basin. I Congreso Internacional de la Cuenca del Lago de Maracaibo. Maracaibo, Venezuela.
- August 2006. **Portillo-Quintero, C.** Fragmentation and Connectivity of the riparian forests of Lake Maracaibo Basin. I Congreso Internacional de la Cuenca del Lago de Maracaibo. Maracaibo, Venezuela.
- August 2006. **Portillo-Quintero, C.** Deforestation in Lake Maracaibo Basin. Colegio de Ingenieros del Estado Zulia. Maracaibo, Venezuela.
- September 2006. **Portillo-Quintero, C.** TROPI-DRY research network: a new data source from the tropical seasonally dry forests. Presented at the SpecNet Meeting. Santa Barbara, California. USA.
- May 2007. **Portillo-Quintero, C.** Tropical Forests of Venezuela: extent and conservation status. ACLAMA Seminar Series. Public Talk at Colegio de Ingenieros del Estado Zulia. Maracaibo, Venezuela.
- May 2007. **Portillo-Quintero, C.** Tropical Forests of Venezuela: extent and conservation status. Symposia: Deforestation and ecological restoration of degraded areas. XVII Congreso Venezolano de Botánica. Maracaibo, Venezuela.
- July 2007. Rodriguez, JP; Nassar, J.; Rodriguez-Clark, K.; **Portillo-Quintero, C;** Zager, I.; Carrasquel, F. & Zambrano, S. Multi-scale assessment of tropical dry forest extinction risk and conservation priorities in northern Venezuela. 2007 Annual Meeting of the Association for Tropical Biology and Conservation (ATBC). Morelia, Mexico.
- July 2007. **Portillo-Quintero, C &** Sanchez-Azofeifa, A. Extent and Conservation Status of Neotropical Dry Forests. Symposium: Human and Biophysical Dimensions of Neotropical Dry forests: Results from a collaborative research network. 2007 Annual Meeting of the Association for Tropical Biology and Conservation (ATBC). Morelia, Mexico.
- November 2008. **Portillo-Quintero, C &** Sanchez-Azofeifa, A. Extent and Geographical distribution of tropical dry forests of America: implications for its management and conservation. In Symposia: "Tropi-Dry: Global change, Conservation and Sustainable Management of the Tropical Dry Forests of America". Congreso Mexicano de Ecología. Nov 2008. Merida, Yucatan, Mexico.



- February 2009. **Portillo-Quintero, C.** Extent and Geographical distribution of tropical dry forests of America. Tropi-Dry Collaborative Research Network Annual Meeting. Chamela-Cuixmala Biosphere Reserve, Jalisco, Mexico.
- May, 2009. **Portillo-Quintero, C.** Towards an Ecosystem Monitoring System for the Lake Maracaibo Basin. Colegio de Ingenieros del Estado Zulia. Maracaibo, Venezuela.
- December 2010. **Portillo-Quintero, C.** Elaboration of a updated vegetation cover map of the Pueblo Viejo watershed using high resolution imagery. Oral presentation for Fundación “Ayudemos al Lago” of the Banco Occidental de Descuento (BOD). Maracaibo, Venezuela.
- February 2011. **Portillo-Quintero, C.** Elaboration of a updated vegetation cover map of the Pueblo Viejo watershed using high resolution imagery. Oral presentation for the Institute of Control and Conservation of Lake Maracaibo Basin, (ICLAM).
- April 2011. **Portillo-Quintero, C.** & Hernández, M. Conservation Status of Venezuelan tropical forests. I Congress on Environmental Sustainability. Universidad Bolivariana de Venezuela.
- May, 2011. **Portillo-Quintero, C.** Use of Remote Sensing for identifying spatial patterns of biodiversity in arid and semiarid ecosystems of North-Western Venezuela. Science & Technology Symposium at IUTAG. Coro, Edo. Falcón. Venezuela.
- November 2011. **Portillo-Quintero, C.** Estimation of Forest cover and deforestation trends in the Lake Maracaibo Basin using remote sensing. 1st Symposium on Perspectives of Euthrophication of Lake Maracaibo Basin: past, present and future. Museum of Contemporary Arts of Zulia (MACZUL).
- August 2012. **Portillo-Quintero, C.** Deforestation patterns and trends in the Lake Maracaibo Basin, Venezuela. Colegio de Ingenieros del Estado Zulia. Maracaibo, Venezuela.
- September 2013. **Portillo-Quintero, C.**, GIS Day, "Investigating tropical forest ecological dynamics using GIS and Remote Sensing," University of Alberta, Edmonton, Canada.
- March 2014. **Portillo-Quintero, C.**, Sanchez-Azofeifa, A. "Remote Sensing of the first frontier of LUCC in the Americas: the Tropical Dry Forests". Earsel/NASA Land Use Land Cover Workshop “Frontiers in Earth Observation for Land System Science”. Berlin, Germany.
- December 2014. **Portillo-Quintero, C.**, Geography Seminar, "Observing life as it happens: remote sensing platforms for very high resolution monitoring of ecosystem dynamics," Lubbock.
- December 2015. **Portillo Quintero, C.**, Smith, V\*., Cao, G. "Emerging deforestation trends in tropical dry forest ecoregions of Mexico and Central America," American Geophysical Union Meeting 2015, San Francisco, California, USA.

- February 2016. Humagain, K\*., **Portillo Quintero, C.**, Cox, R., Cain, J., , "Mapping structural diversity of trees in the Southwest Jemez Mountains of New Mexico using Landsat 8 Data", Society for Range Management, Corpus Christi, Texas.
- July 2016. **Portillo-Quintero, C.** Remote Sensing as a tool for monitoring ecosystem services in tropical forests. In: Seminar "Professional Development Seminar on Management Ecosystem Services from Tropical Forests". Liberia, Costa Rica. 25-30 July, 2016. Organized by the Interamerican Institute of Global Change Research (IAI). <http://www.iai.int/?p=11917>
- July 2016. Barnes, M., Soto, S. D., Mach, C., **Portillo Quintero, C.**, Rockwell, C., Erickson, K., "Combining multiple species distribution modeling approaches to predict suitable habitat for the invasive aquatic macrophyte *Hydrilla verticillata*," Aquatic Plant Management Society 56th Annual Meeting, Grand Rapids, MI.
- July 2016. Soto, S. D., Mach, C., **Portillo Quintero, C.**, Rockwell, C., Erickson, K., Barnes, M., "Incorporation of biotype alters species distribution model predictions of suitable habitat for the invasive aquatic macrophyte *Hydrilla verticillata*," Aquatic Plant Management Society 56th Annual Meeting, Grand Rapids, MI.
- August 2016. Raleigh, D\*., **Portillo Quintero, C.**, Grisham, B., Johnson, B., Athearn, N., Collins, D., Oldenburger, S., Conway, W., McIntyre, N., , "Assessing Sandhill Crane overwintering resource use in west Texas using GIS and remote sensing.," Ecological Society of America. Ft. Lauderdale, FL.
- August 2016. Soto, S. D., Mach, C., **Portillo Quintero, C.**, Rockwell, C., Erickson, K., Barnes, M. "Incorporation of biotype alters species distribution model predictions of suitable habitat for the invasive aquatic macrophyte *Hydrilla verticillata*," Ecological Society of America 101st Annual Meeting, Fort Lauderdale, FL.
- October 2016. De la Piedra, S\*, **Portillo Quintero, C.**, Grisham, B., Boal, C., Haukos, D., Heck, W. Student Conference on Conservation Science, "Remotely-sensed vegetation seasonality parameters for monitoring wildlife populations," American Museum of Natural History, New York, USA.
- July 2017. **Portillo-Quintero, C.** & Wan, Zhanming\*. Forest Conservation in No Man's Land: forest loss and protected areas in the Catatumbo Basin. In the symposium: "Eliminating a false dichotomy: the importance of human-modified landscapes for conservation plans". Annual Meeting of the Association for Tropical Biology and Conservation (ATBC). Merida, Mexico.
- August 2018. Jackson, M\*; **Portillo-Quintero, C.**; Cox, R.; Ritchie, G. Evaluating the use of uav-based remote sensing system to detect rangeland plant species in the Texas Panhandle. Poster Presentation given at the International Aridlands Conference, Texas Tech University. Lubbock, TX.

August 2018. **Portillo-Quintero, C**; Sanchez-Azofeifa A. Remote sensing of neotropical dry forests: insights from a decade of research. Oral Presentation given at the International Aridlands Conference, Texas Tech University. Lubbock, TX.

October 2018. **Portillo-Quintero, C**; Grisham, B.; Boal, C.; Haukos, D.; Hagen, C. & Wan, Z\*. Assessing the Extent and Landscape Structure of Sand Shinnery Oak Prairie in the Southern High Plains Using GIS and Remote Sensing: Challenges and Future Directions . Oral Presentation at the “Texas GIS Forum 2018”; Texas Natural Resources Information System; Austin, Texas.

October 2018. **Portillo-Quintero, C**; Perotto, H; Jackson, M\*. From the box to image analysis: on-site demonstration of an unmanned aerial system. Oral Presentation at the Technical Session entitled “Advances in Geospatial Technologies: New tools, new questions” organized by Dr.Portillo-Quintero (TTU); Dr. Perotto Texas A&M) and Dr. Cox (TTU). Annual Meeting of the Texas Chapter of the Society of Range Management, Lubbock, Texas.

March 2019. **Portillo-Quintero, C**. Land Abandonment and Forest Restoration in Latin America: stories from Central America and the Colombia-Venezuela frontier. 4th Hispanic/Latinx Research and Creativity Symposium. Texas Tech University, Lubbock, TX. USA.

### **GRADUATE STUDENT COMMITTEES:**

**Completed: 12**

**Chaired: total of 6**

#### **M.S.**

1. Daniel Raleigh, Completed in 2016. Title of thesis: Geodatabase design and implementation for Sandhill Crane wintering habitat conservation
2. Sylvia de la Piedra, Completed in 2017. Title of thesis: Assessment of vegetative seasonality patterns as related to productivity and home range sizes of lesser prairie chickens in west Texas and eastern New Mexico.
3. Alsulaiman, Abdullah, Completed in 2017. Title of Thesis: Land use/Land cover Trends in 28 Reservoirs of The Brazos River: a preliminary analysis using NLCD data (2001-2011).
4. Vaughn Smith, Completed in 2017, Title of thesis: Near Real-Time Monitoring of Deforestation in the Tropical Dry Forests of Latin and Central America
5. Matthew Jackson, Completed in 2019, Title of thesis: Evaluating the effectiveness of UAV-based remote sensing systems to detect rangeland plant species in the Texas panhandle
6. Nwasinachi Menkiti, Completed in 2019, Title of Thesis: Understanding land cover change in a dry sub-humid nature reserve in Ghana through OpenStreetMap and remote sensing

**Committee member of MS/PhD completed: total of 6**

1. Seydou Toe, MS, Completed in 2017, Department of Natural Resources Management, College of Agricultural Sciences and Natural Resources, TTU.
2. De Gao, PhD, Completed in 2017, Department of Natural Resources Management, College of Agricultural Sciences and Natural Resources, TTU
3. Morgan Martin, MS, Completed in 2018, Department of Plant and Soil Science, College of Agricultural Sciences and Natural Resources, TTU.
4. Geeta Kharel, MS, Completed in 2018, Department of Plant and Soil Science, College of Agricultural Sciences and Natural Resources, TTU.
5. Ryan Jost, MS, Completed in 2018, Department of Geosciences, College of Arts and Sciences, TTU.
6. Congliang Zhang, MS, Completed in 2019, Department of Geosciences, College of Arts and Sciences, TTU.

**In progress: 13**

**Chair: total of 1**

**Ph.D.**

1. Nwasinachi Menkiti, Interdisciplinary PhD in Landscape Planning, Management & Design (LPMD; College of Architecture). Anticipated completion date: Fall 2019.

**Co-Chair: total of 1**

**Ph.D.**

1. Mukti Subedi, PhD in Wildlife, Aquatic, and Wildlands Science and Management. Anticipated completion date: Fall 2022. Co-chaired with Dr. Samantha Kahl.

**Committee member of MS/PhD in progress: total of 11**

1. Carlos J Garcia, PhD, Department of Natural Resources Management, College of Agricultural Sciences and Natural Resources, TTU.
2. Cristina Rios Blanco, PhD, Cristina Rios Blanco, PhD, Department of Plant and Soil Science, College of Agricultural Sciences and Natural Resources, TTU.
3. John Stuhler, PhD, Cristina Rios Blanco, PhD, Department of Plant and Soil Science, College of Agricultural Sciences and Natural Resources, TTU.
4. Juan Garcia, PhD, Department of Natural Resources Management, College of Agricultural Sciences and Natural Resources, TTU.
5. Katheryn Watson, PhD, Department of Natural Resources Management, College of Agricultural Sciences and Natural Resources, TTU.
6. Kathryn Brautingham, PhD, Department of Natural Resources Management, College of Agricultural Sciences and Natural Resources, TTU.

7. Manpreet Singh, MS, Department of Plant and Soil Science, College of Agricultural Sciences and Natural Resources, TTU.
8. Atinderpal Singh, MS, Department of Plant and Soil Science, College of Agricultural Sciences and Natural Resources, TTU.
9. Andres Cordero, PhD, Department of Biology, College of Arts and Sciences, TTU.
10. Gabriela Reyes –Palomeque, PhD, Department of Natural Resources, Center for Scientific Research of Yucatan (CICY).
11. Eric Gamboa, PhD, Department of Natural Resources, Center for Scientific Research of Yucatan (CICY).

**TEACHING RESPONSIBILITIES:**

NRM 4000 Internship (Years:17,18, 19)

NRM 4001 Undergraduate Research (Years:18,19)

NRM 4315 Spatial Analysis in Natural Resource Management (Years: 15,16,17,18,19)

NRM 5404 Aerial Terrain Analysis (Years: 19)

NRM 6001 Selected Topics in Range Science: Advanced Remote Sensing (Years:16)

NRM 6303 Imagery Interpretation for Natural Resource Management (Years: 15,16,17,18,19)

NRM 6305 Geospatial Technologies in Natural Resource Management (Years: 15,16,17,18,19)

NRM 7000 Research (Years: 15,16,17,18,19)

**GRANTS AND AWARDS: Total funded \$: 2,415,865 Own portion \$: 593,085**

**Funded:**

**2015**

1. **PI.** Title: Deforestation dynamics in Tropical Dry Forests of Central America and the Caribbean using time-series of satellite imagery. Subcontract for the University of Alberta, Canada under the ‘Tropi-Dry Collaborative Research Network 3 (supported by the Inter-American Institute for Global Change Research (IAI)-US National Science Foundation Grant GEO-1128040). Total Amount funded: \$79,275. Own portion: \$79,275 (100%). Duration: 2015-2018
2. **Co-PI.** Title: Mappers Without Borders. USAID. Total Amount funded: \$999,000. Own portion: \$69,930 (7%). Duration: 2015-2018.

**2016**

1. **Co-PI.** Title: MGT, Wetland/Floodplain, Coyote Springs Salt Cedar Removal and Restoration for Natural Resources, Kirtland Air Force Base, Albuquerque, New

Mexico. U.S. Army. Total Amount funded: \$89,827. Own portion: \$19,761 (22%). Duration: 2016.

2. **PI.** Title: High-resolution image spectrometry of leaf stress and mechanical foliar damage caused by thrips in cotton seedlings. Bayer CropScience. Total Amount funded: \$142,112. Own portion: \$56,844 (40%). Duration: 2016-2019.
3. **PI.** Title: Historical trends of the landscape structure of plant communities of Sand Shinnery Oak Prairie in the Southern High Plains: establishing a foundation for the restoration of lesser. USDA - NRC/Pheasants Forever. Total Amount funded: \$ 154,424. Own portion: \$ 108,096 (70%). Duration: 2016-2019.

**2018**

1. **Co-PI.** Title: Endangered Species Research Projects for the Texas Kangaroo Rat. Texas Comptroller of Public Accounts. Total Amount funded: \$79,482. Own portion: \$ 39,741 (50%). Duration: 2018-2019
2. **Co-PI.** Title: Landscape assessment of west and south Texas grasslands to inform conservation of two native reptile species of concern in Texas. Texas Comptroller of Public Accounts. Total Amount funded: \$869,745. Own portion: \$ 217,436.25 (25%). Duration: 2019-2022.

**2019**

1. **PI.** Title: Prototyping a monitoring system for detecting emerging deforestation trends in and around tropical forest reserves. International Research and Development Seed Grant, Office of International Affairs, Texas Tech University. Total Amount funded: \$2,000. Own portion: \$ 2,000 (100%). Duration: 2019

**Summary Table of funded projects**

<b>Project Title</b>		<b>Sponsor</b>	<b>Project Amount</b>	<b>Own portion</b>
Landscape Assessment of West and South Texas Grasslands	Co-PI	Texas Comptroller of Public Accounts	\$869,745.00	\$217,436.25
Historical trends of the landscape structure plant communities of Sand Shinnery Oak	PI	Pheasants Forever	\$154,424.00	\$108,096.80
Salt Cedar Removal and Restoration for Natural Resources, Kirtland Air Force Base, Albuquerque, New Mexico	Co-PI	DOD – Army Corps of Engineers	\$89,827.00	\$19,761.94
Mapping for Resilience University Consortium	Co-PI	United States Agency for Intl Devpt	\$999,000.00	\$69,930.00
Tropi-Dry CRN3 subcontract	PI	University of Alberta/IAI	\$79,275.00	\$79,275.00
RFP No. 209f for Endangered Species Research Projects for the Texas Kangaroo Rat	Co-PI	Texas Comptroller of Public Accounts	\$79,482.00	\$39,741.00

<i>Not included in TTU-Office of Research Services</i>				
High resolution spectrometry of Cotton Crops	PI	Bayer CropScience/TTU	\$142,112.00	\$56,844.80
Prototyping a monitoring system	PI	Office of International Affairs TTU	\$2,000	\$2,000
		<b>TOTAL</b>	\$2,415,865.00	\$593,085.79

### **OTHER PROFESSIONAL SERVICE:**

1. Reviewer, Forests (MDPI Journal), (September 2014 - Present).
2. Reviewer, Remote Sensing (MDPI Journal) (January 2017 - Present).
3. Peer review panel member for the “MEaSURES: Making Earth System Data Records for use in Research Environments” projects under Research Opportunities in Space and Earth Sciences (ROSES) program, National Aeronautics and Space Administration (NASA), (July 2017).
4. PDS team advisor. Research subject: Ecosystem services: an evaluation and economic valuation of carbon uptake in the Guanacaste Conservation Area, Costa Rica. Monthly follow up of project developed by students from several Latin American institutions as part of the seminar “Professional Development Seminar on Management Ecosystem Services from Tropical Forests”. Organized by the Interamerican Institute of Global Change Research (IAI). <http://www.iai.int/?p=1191>
5. Member of the Commission on Ecosystem Management and the Red List of Ecosystems Thematic Group, International Union for the Conservation of Nature, (July 1, 2017 - Present).
6. International Forestry Review, Reviewer, Journal Article. (January 2018 - Present).
7. Reviewer, Ecosystems Services (Elsevier Journal), (January 2018 - Present).
8. Peer-review panel member for the “ACCESS 2017: Advancing Collaborative Connections for Earth System Science” projects under Research Opportunities in Space and Earth Sciences (ROSES) program. National Aeronautics and Space Administration (NASA). (March 2018).
9. Grant Proposal Reviewer for the “Accelerating Scientific Discovery (ASDI) Program: Enhancing Data- and Compute-Intensive Research”. Netherlands eScience Center (NLeSC) and Netherlands Organization for Scientific Research (NWO). (April 2018).
10. Reviewer, Journal of Environmental Management (Elsevier) (May 2018 - Present).
11. Academic Editor, PLOS One (November 2018 - Present).

12. Guest Editor, PLOS One - Biodiversity Conservation Call for Papers (June 2019 - Present).

**SERVICE TO:**

**UNIVERSITY:**

1. 16<sup>th</sup> Annual Graduate Student Research Poster Competition, Competition Adjudicator/Juror, approximately 4 hours (One Time), Pro Bono. (March 1, 2017 - Present).
2. PhD dissertation defense “Divergence time and rates of evolution among New World Mammarenaviruses” by Narayan Kandel, Department of Biological Sciences, Dean's Representative, approximately 4 hours (One Time). (2017).
3. PhD dissertation defense “Analysis of Dune Morphology within the Rub’al Khali using geospatial technologies” by Fahad Almutlaq, Department of Geosciences, Dean's Representative. (August 2017).
4. TTABS 2019 Undergraduate Student Research Poster Competition, Competition Adjudicator/Juror, approximately 4 hours (One Time), Pro Bono. (April, 2019 - Present).
5. PhD dissertation defense “Novel strategies to model biofilm development and foodborne pathogen persistence on food environmental surfaces” by Ilan Arvelo, Department of Animal and Food Sciences, Dean's Representative. (June 2019).

**COLLEGE:**

1. Search Committee for the new Chair of the Dept. of Landscape Architecture, Committee Member, approximately 4 approximately 4 hours (Monthly), appointed, Pro Bono. (June 4, 2015 - April 30, 2016).

**DEPARTMENT:**

1. Director of the Geospatial Technologies Laboratory. As the manager of the GST Lab, it is my duty to oversee the generation and administration of ArcGIS student licenses, as well as ERDAS Imagine and PIX4D licenses for the faculty and students. I was responsible for supervising the creation of the GST-Teaching Lab (AgSci Bldg 117) and the installation of 21 Desktop PCs and a projector in the lab. I currently serve as the lab manager for this facility, which includes computer maintenance and upgrading tasks. (September 1, 2014 - Present).
2. Undergraduate Advisor, 26 students, (September 1, 2014 - Present).
3. Undergraduate Curriculum Committee, Committee Member, approximately 8 hours (One Time). (2016 - Present).



