

CARLOS A. PORTILLO-QUINTERO

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SUMMARY

Biologist with a PhD and postdoctoral work in environmental monitoring. Specialized in the implementation of GIS and remote sensing technologies. Technical skills include vector geodatabase creation and analysis, satellite imagery geometric processing and spectral analysis as well as advanced knowledge of GIS spatial analysis tools and applications. Experience in the design and field implementation of remote sensing for real-time monitoring of environmental variables. Experience in project management, participation in interdisciplinary research groups, personnel supervision and university-level teaching. Scientific publications in international peer-review journals and books.

Professional Experience

TEXAS TECH UNIVERSITY, USA.

Sep 2014 - present

Assistant Professor, Department of Natural Resources Management, College of Agricultural Sciences & Natural Resources, Texas Tech University, Lubbock, Texas, USA.

UNIVERSITY OF ALBERTA, CANADA.

Feb 2013 – Aug 2014

Center for Earth Observation Sciences (CEOS). Postdoctoral Research Fellow.

- Wireless Sensor Networks for Environmental Monitoring. Key partner in the field design, deployment and maintenance of wireless sensor networks for microclimate (Temperature, Relative Humidity, Soil Moisture), carbon dioxide and water flux monitoring in grasslands, conifer forests, Aspen parkland, and tropical forests. Study sites in Alberta and Guanacaste Conservation Area, Costa Rica.
- Lead and coordinate the design and management of the Enviro-Net web portal (www.enviro-net.org). This includes setting up regular meetings with the system engineer, programmer and two technicians in order to monitor the advance of changes and improvements to the web portal.

Department of Earth & Atmospheric Sciences. Faculty of Science.

Seasonal Instructor in the subject of “Introduction to Geographic Information Systems and Remote Sensing” (Fall 2013).

VENEZUELAN INSTITUTE OF SCIENTIFIC RESEARCH (IVIC), VENEZUELA.

Jun 2010 – Dec. 2012

Center for Botanical and Agroforestry Studies.

Associate Researcher. Head of Laboratory for the Protection of Arid zones. Project management, budget administration and personnel supervision.

UNIVERSITY OF ALBERTA, CANADA.

Jul 2005 – Jun 2010

Department of Earth & Atmospheric Sciences

Graduate Research & Teaching Assistant. PhD thesis design and implementation which involved fieldwork in tropical dry forests in Costa Rica, Brazil, Mexico, Venezuela and Panama within the objectives of the *Tropi-Dry Collaborative Research Network* ([www. http://tropi-dry.eas.ualberta.ca/](http://tropi-dry.eas.ualberta.ca/)). Teaching assistantship to undergraduate and graduate courses in Geographic Information Systems and Remote Sensing.

CONSERVATION NGO PROVITA, VENEZUELA.

April 2004 – Jul 2005

Geographic Information Systems (GIS) and Remote Sensing Analyst.

Threatened Habitats Project (National Science Award 2007). Geodatabase design, image processing, fieldwork for validation and result reporting during a land cover mapping analysis in north-central Venezuela.

Education

UNIVERSITY OF ALBERTA. *Edmonton, Alberta, Canada.*

Doctor of Philosophy (PhD) in Earth & Atmospheric Sciences. 2010. Thesis: “*Assessing the Conservation Status of Neotropical Dry Forests using Geographic Information Systems & Remote Sensing*”. Supervisor: Dr. Arturo Sanchez-Azofeifa.

UNIVERSIDAD DEL ZULIA *Maracaibo, Venezuela*

Bachelor of Science in Biology. 2004.

SPECIAL TRAINING:

- IBM Infosphere Stream Analytics Workshop. Sept 3-6, 2013. Instructor: Dr. Alain Biem. IBM Watson Research Center. Mount Kisco, NY. USA.
- VEGNET Ground LiDAR system Workshop. Aug 9th, 2013. Instructor: Dr. Darius Culvenor, CSIRO-Terrestrial Ecosystem Research Network. Edmonton, AB. Canada.
- *Alter-Net Summer School 2007. European ecosystems and policy.* Course offered by the Potsdam Institute for Climate Impact Research. Peyresq, Alpes-Haute-Provence, France, September 1st – 15th. 2007.
- 2005-2010. Department of Earth & Atmospheric Sciences, University of Alberta. Relevant PhD program courses: 1.- Advanced Remote Sensing, 2.- Topics in Human Geography, 3.- Advanced topics in GIS
- *Advanced Geographic Information Systems for Ecological Applications.* Course offered by Center of Ecology, Venezuelan Institute for Scientific Research. Altos de Pipe, Edo. Miranda. April- July 2004.
- *Effective Lectures for Managers.* Offered by Institute of Superior Studies in Administration (IESA). Maracaibo, Venezuela. March, 2004.
- *Project Design and Analysis for Biodiversity Management.* Hato El Cedral, Estado Apure. PROVITA, Conservation International and the Center of Ecology, Venezuelan Institute for Scientific Research. October-November, 2002.

Languages Fluent in English and Spanish. Basic Portuguese.

Technical Skills:

- Design, implementation and maintenance of Geographic Information Systems (GIS) using ArcGIS desktop software.
- Extensive experience in imagery processing from space-borne spectrometers such as Landsat, Chris/Proba, SPOT, Quickbird, Ikonos, and MODIS using ERDAS Imagine, ENVI and ArcGIS, as well various open-source software.
- Extensive experience in vector and raster geodatabase design and spatial analysis using ArcGIS and open-source software.
- Design and implementation of field campaigns for land cover characterization and mapping as well as advanced techniques for deforestation monitoring using remote sensing.
- Experience in the field installation of sensor stations for weather, vegetation health and soil moisture monitoring.
- Field implementation and data analysis from *In-Situ* Monitoring LiDAR systems (e.g. VEGNET/CSIRO).
- Experience in the design and implementation of vegetation inventories in tropical forest ecosystems.
- Proficient in the use of Microsoft Office and statistical packages such as Systat, PAST and SigmaPlot.

Awards:

- 2011/2012 Research Stimulus Award. Ministry of Science and Technology, Venezuela.
- 2007 J Gordin Kaplan Award. Faculty of Graduate Studies and Research, University of Alberta, Canada.
- 2006 Eugene Brody Scholarship in recognition of academic excellence as a graduate student. Faculty of Graduate Studies and Research, University of Alberta, Canada.
- 2006 Vega Graduate Scholarship in recognition of academic excellence as a graduate student. Faculty of Graduate Studies and Research, University of Alberta, Canada.
- 2006 Graduate Teaching Assistant Award in recognition of excellence in teaching as a graduate student. University Teaching Services, University of Alberta, Canada.