Steven Paul Chávez Jara

Contact Information
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Education
Degree in Physics, Expected February 2013
Pontifical Catholic University of Peru
Thesis Title: "Characterization of storms in the Mantaro Valley (Tropical Andes of Central Peru) using remote Sensing"

Bach. Physics, February 2011
Pontifical Catholic University of Peru

Other Courses
Marine Meteorology and interaction Ocean-Atmosphere, Master of Marine Sciences of the Cayetano Heredia Peruvian University (UPCH). August-September of 2012

Advanced Topics in Climate Change in the Ocean, Master of Marine Sciences of the Cayetano Heredia Peruvian University (UPCH). February 2012.

International Training Course in Radar Interferometry given by the European Space Agency at the Peruvian Space Agency. Lima, Peru, October 2011.

Geophysical fluid dynamics, Elective course at the Pontifical Catholic University of Peru (PUCP). Second Semester of 2010.

Introduction to the Atmospheric Sciences, Elective course at the Pontifical Catholic University of Peru (PUCP). First Semester of 2010.

Research Experience

* Research Assistant, Geophysical Peruvian Institute (IGP). September 2011-present.

  My principal research consisted in the use of data from the TRMM precipitation radar (PR), GOES Infrared Images and the World Wide Lightning Location Network to characterize the storms on the Tropical Andes of Central a Peru. I have detailed knowledge of the products 2A23 and 2A25 and the scan geometry of PR, which led me to elaborate a climatology of 0.05º resolution with the 2A25 data. Now, my next research topic is the study of the hot spots of rain in the eastern border of the peruvian Andes.

* Thesis student, Geophysical Peruvian Institute (IGP). July 2010- August 2011.

  The main core of my thesis was to characterize the storms (extension, intensity, height, rain type) around a very important valley in the central Andes of Peru using the TRMM PR 2A23 and 2A25 products, and to validate the 2A25 algorithm with field measurements of the Drop Size Distribution, which determines the R-Z relationship.

Teaching Experience

Teaching Assistant, Pontifical Catholic University of Peru (PUCP), Second semester of 2009 and 2010.

Academic Recognitions

Member of the 91vo Student Chapter of the Optical Society of America (OSA- PUCP). June 2008 – December 2009.
As member of the OSA-PUP chapter, the chapter won the Educational Outreach grant program and the Activity grant program.

Publications:

Chávez S. P. & Takahashi K. (2013) High resolution Rainfall characteristics in the tropical Andes of central Peru (3500 m.a.s.l.) as seen by the TRMM PR, and the relation with IR brightness temperature. In preparation for the Journal of the Atmospheric Sciences.

Chávez S. P. & Takahashi K. (2012) Caracterización de tormentas intensas mediante sensoramiento remoto [Characterization of heavy storms in the Mantaro valley using remote sensing]. Resultados del proyecto Manejo de riesgos de desastres ante eventos meteorológicos extremos (sequías, heladas y lluvias intensas) como medida de adaptación ante el cambio climático en el valle del Mantaro. 1,135 -139. http://www.met.igp.gob.pe/publicaciones/2012/maremexvol1.pdf.pdf

Chávez S. P. (2011) Caracterización de tormentas intensas en el valle del Mantaro mediante sensoramiento remoto [Characterization of heavy storms in the Mantaro valley using remote sensing]. Compendio de trabajos de investigación realizados por estudiantes durante el año 2010, 12, 25-30.
http://www.igp.gob.pe/igp/images/documents/cbohorquez/daa/compendio/compendio2011.pdf

Selected Presentations

How does the effect of topography looks in very high resolution rainfall data?, International Scientific Meeting. Lima, Peru, January 2013.

The storms in the central andes of Peru as seen by the TRMM precipitation radar. International Scientific Meeting. Lima, Peru, August 2012.

Poster accepted: Characterization of Heavy Storms in the Peruvian Andes using the TRMM Precipitation Radar, American Geophysical Union Chapman Conference on Remote Sensing of the Terrestrial Water Cycle. Kona, Hawaii, USA, February 2012.

Characterization of Heavy Storms and Intense Rain, International Scientific Meeting. Lima, Peru, January 2012

Characterization of Heavy Storms in the Mantaro Valley using Remote Sensing, IVth Scientific Meeting of the Environmental Research Observatory (ORE) HYBAM on the large Amazonian rivers. Lima, Peru, September 2011.

Programming and Software skills

Proficient in: Matlab, Arcgis, Microsoft Office products (Word, Excel, and PowerPoint), and LaTex.
Experience with: Linux, MacOSX, Octave, HDFview, THOR orbit viewer, Google Earth.

Language Skills

English and Spanish (native speaker)

References:

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