

## Luis Eduardo Pineda Ordóñez

Contact address: Vattengatan 26/ 028, SE - 602 20, Norrköping, Sweden

Telephone: +46-73 082 8494

E-mail: [Luis.Pineda@smhi.se](mailto:Luis.Pineda@smhi.se)

Nationality: Ecuadorian, Belgian

### WORK EXPERIENCE:

---

2016-Present **Post Doc Researcher**

Swedish Meteorological and Hydrological Institute (SMHI), Hydrological research Unit

- Large-scale hydrological modeling using HYPE model
- Task includes optimization of meteorological forcing, setup and assimilation of observations, calibration and uncertainty analysis

2015-Present **Docent (Associate)**

Universidad Técnica Particular de Loja (UTPL), Departamento de Geología, Minas e Ingeniería Civil (Ecuador). Seminars in MSc. in water resources on topics:

- Hydro-meteorological information from remote sensing and global climate models: Applications on hydrology
- Operational climate and hydrological prediction

2010-2014 **PhD Researcher**

KU Leuven, Department of Civil Engineering, Hydraulics Section (Belgium)

- Project: Climate variability and rainfall response: Analysis and Predictability in the Pacific-Andean basin of NW South-America (EU-funded Individual research grant) <https://lirias.kuleuven.be/handle/123456789/485711>
- Other duties: teaching assistantship, MSc. thesis supervision

2003-2006 **Civil Engineer**, Water Resources Department, Prefectura de Loja (Ecuador)

- Planning, design and implementation of water supply and sanitation projects
- Proposal writing for National Funding Agencies and NGO's
- Training and capacity development for rural water managers

### EDUCATION:

---

2010-2014 **PhD Civil Engineering** – Hydro-climatology

KU Leuven (Belgium)

2009-2010 **MA Sustainable Water Resources** (emphasis on climate)

ETH Zurich, Zurich (Switzerland)

2006-2008 **MSc. Water Resources Engineering**, Cum Laude

KU Leuven – VU Brussel (Belgium)

1997-2002 **BEng. Civil Engineering**

Universidad Técnica Particular de Loja (Ecuador)

**MERIT BASED GRANTS AND DISTINCTIONS:**

---

- WMO - World Climate Research Programme / travel grant for 7th International Scientific Conference on the Global Water and Energy Cycle, 14-17 July, The Hague, The Netherlands, 2014.
- National Centre of Atmospheric Research NCAR / full grant for ASP Summer colloquium on “Statistical Assessment of Extreme Weather Phenomena under Climate Change”, Colorado Boulder USA (declined), 2011.
- European Commission / EMA2 Program lot 19b / Grant for Doctoral Studies in KU Leuven, 2010.
- Ecuadorian Secretary of Science and Technology SENACYT and Group of Hydrology and Water Resources Management ETH Zurich (tuition fee) / Grant for MA in Sustainable Water Resources, 2009.
- Flemish Interuniversity Council for University Development Cooperation, VLIR-UOS scholarship for ICP Master in Water Resources Engineering, 2006.
- Wageningen University – WALIR Project, Scholarship for outstanding young professionals working in water resources in the Andean region, Lima-Peru, 2004.
- Japan International Cooperation Agency, JICA 3rd Countries Training Program, TCTP scholarship for International course on waste water treatment, Sao-Paolo-Brazil, 2003.

**SCIENTIFIC MEMBERSHIP AND JOURNALS:**

---

- European Geosciences Union
- American Meteorological Society
- Reviewer: Journal Hydrology Regional Studies  
International Journal of Climatology

**SKILLS:**

---

**JOB RELATED TRAINING WITH CERTIFICATION**

- The Abdus Salam School, International Centre for Theoretical Physics (ICTP), Course: Advanced School and Workshop on Subseasonal to seasonal (S2S) Prediction and Application to Drought Prediction, Trieste Italy, November-December 2015
- International School Water Research School (FIVA), Course: Earth Observation for Climate Change Research University of Copenhagen, 22-27 October 2012

**COMPUTING**

- Operating systems: Windows and Linux (basic)
- Script programming: R (preferred), Matlab (good), NCL and Ingrid Postscript for climate data analysis (good), Fortran (Basic)
- Several modelling software for hydrology (DHI hydro tools, HYPE, InfoWorks ICM), environmental engineering and geomatics (ARC GIS / IDL)

**LANGUAGE**

- Spanish (native speaker)
- English (professional proficiency)
- Dutch (good)

**PEER-REVIEWED PUBLICATIONS:**

- Pineda, L., P. Willems (2016), Rainfall extremes and their weather and climate characterization over complex terrain: A data-driven approach based on signal enhancement methods and extreme value modelling, *J. Hydrol.* (to submit revised version)
- Pineda, L., P. Willems (2016), Multisite Downscaling of Seasonal Predictions to Daily Rainfall Characteristics over Pacific-Andean River Basins in Ecuador and Peru using a non-homogenous hidden Markov model, *J. Hydrometeor.* 17(2), 481-498, doi:10.1175/JHM-D-15-0040.1, <http://journals.ametsoc.org/doi/full/10.1175/JHM-D-15-0040.1>
- Ochoa, A., L. Pineda, P. Crespo, and P. Willems (2014), Evaluation of TRMM 3B42 (TMPA) precipitation estimates and WRF retrospective precipitation simulation over the Pacific-Andean region of Ecuador and Peru, *Hydrol. Earth Syst. Sci.*, 18, 3179-3193, doi:10.5194/hess-18-3179-2014, <http://www.hydrol-earth-syst-sci.net/18/3179/2014/hess-18-3179-2014.html>
- Pineda, L., V. Ntegeka, and P. Willems, (2013), Rainfall variability related to sea surface temperature anomalies in a Pacific-Andean basin into Ecuador and Peru. *Advances in Geosciences*, 33, 53-62, doi:10.5194/adgeo-33-53-2013, 2013, <http://www.adv-geosci.net/33/53/2013/adgeo-33-53-2013.html>

**CONFERENCE PUBLICATIONS:**

- Pineda Ordonez, L., Willems, P. (2017). Rainfall extremes, weather and climatic characterization over complex terrain: A data-driven approach based on signal enhancement methods and extreme value modeling. *Geophysical Research Abstracts*, 19, art.nr. EGU2017-12923
- Arheimer, B., Andersson, J., Crochemore, L., Donnelly, C., Gustafsson, D., Hasan, A., Isberg, K., Pechlivanidis, I., Pimentel, R., Pineda, L. (2017). Global, continental and regional water balance estimates from HYPE catchment modelling. *Geophysical Research Abstracts*, art.nr. EGU2017-10583
- Pimentel, R., Crochemore, L., Hasan, A., Pineda, L., Isberg, K., Arheimer, B. (2017). Synchronizing data sources and filling gaps by global hydrological modeling. *Geophysical Research Abstracts*, art.nr. EGU2017-12576
- Pineda Ordonez, L., Willems, P. (2015). Weather-type downscaling of seasonal predictions to daily rainfall characteristics over the Pacific-Andean basin of Ecuador and Peru. *Geophysical Research Abstracts*, 17, art.nr. EGU2015-14802.
- Pineda, L., Willems, P. (2014). Analysis of daily rainfall characteristics on sub-seasonal to inter-annual time scales in NW South America using a HMM model, 7th International Scientific Conference on the Global Water and Energy Cycle- GEWEX,14-17, The Hague, The Netherlands, 2014.
- Pineda, L., Willems, P. (2014). Seasonal and inter-annual variability of rainfall extremes in the boundary of the ENSO impact area in NW South-America. *International Conference on Subseasonal to Seasonal Prediction*. NOAA Center for Weather and Climate Prediction, College Park, MD, USA., 10-13 February 2014.
- Pineda, L., Willems, P. (2012). Atmospheric circulation and extreme rainfall modelling into Southern Ecuador Northern Peru. *Earth Observation for Climate Change Research - International Research School of Water Resources*. University of Copenhagen, 22-27 October 2012.
- Pineda, L., Ntegeka, V., Willems, P. (2010). Rainfall variability in Catamayo-Chira basin, Southern Ecuador – Northern Peru and its relation with ENSO. *International Workshop on ENSO, Decadal Variability and Climate Change in South America: “Trends, Tele-connections and Potential Impacts”*, Ecuador, 12-14 October 2010.

**BOOKS - THESIS:**

- Pineda Ordonez, L., Willems, P. (2008). Floodplain modeling for the Grote-Nete River Basin (Belgium), M.Sc. Thesis IUPWARE, 89 pp.
- Pineda Ordonez, L., Willems, P. (2015). Climate Variability and Rainfall Response: Analysis and Predictability in the Pacific-Andean basin of Ecuador and Perú, Ph.D. Thesis, 159 pp.