



# Lorena Abad

RESEARCHER | ENVIRONMENTAL ENGINEER | MSc. GEOSPATIAL TECHNOLOGIES

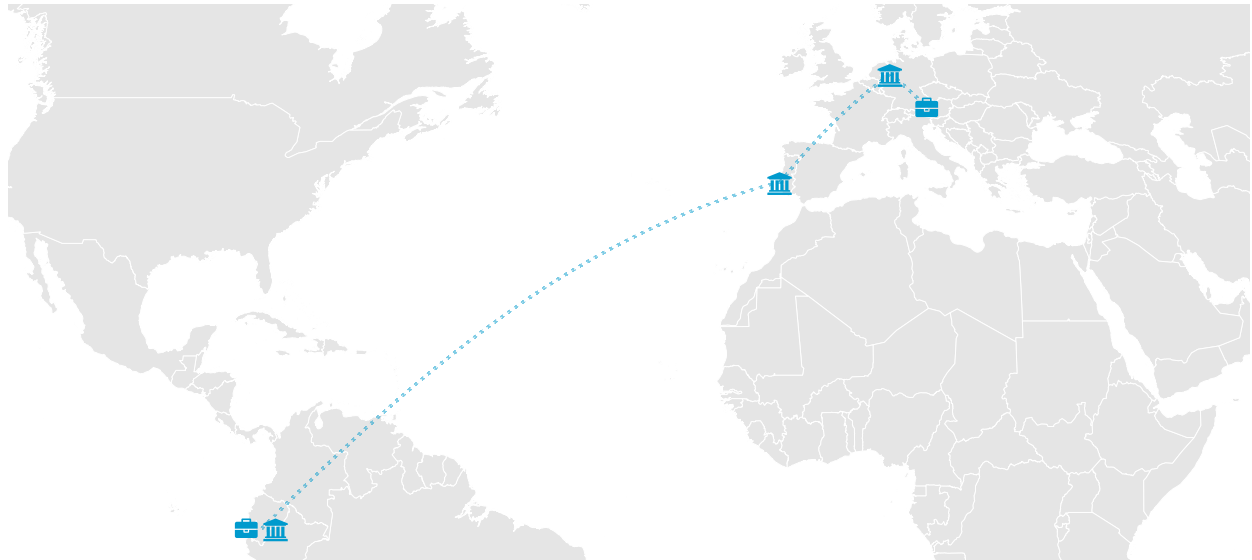
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## ✈ My journey



## 🎒 Professional Experience

### Researcher - Department of Geoinformatics - Z\_GIS

UNIVERSITY OF SALZBURG

Salzburg, AT

04, 2019 - Present

- Researcher for the MORPH, RiCoLa, STEC, citizenMORPH, MontEO projects in the Landslide division of the OBIA group.

### Research Assistant - Grupo de Investigación de Ciudades Sustentables Llaclalab - Departamento Interdisciplinario de Espacio y Población

UNIVERSIDAD DE CUENCA

Cuenca, EC

05, 2017 - 08, 2017

- Spatio-temporal data analyst for the project: "Study of Cyclists and Pedestrian Mobility Patterns in Cuenca for a Sustainable Mobility".

### Technical Assistant - Carrera de Ingeniería Ambiental - Facultad de Ciencias Químicas

UNIVERSIDAD DE CUENCA

Cuenca, EC

09, 2016 - 08, 2017

- CEDIA project "Geo-statistical Inference of Meteorological Data for Azuay and Chimborazo provinces".

### Researcher - Carrera de Ingeniería Ambiental - Facultad de Ciencias Químicas

UNIVERSIDAD DE CUENCA

Cuenca, EC

10, 2016 - 01, 2017

- Project "Water Quality and Environmental Variables Monitoring in Artificial Habitats for Endangered Species in Cuenca".

### Research Assistant - Carrera de Ingeniería Ambiental - Facultad de ciencias Químicas

UNIVERSIDAD DE CUENCA

Cuenca, EC

03, 2016 - 07, 2016

- Project "Determination of Particulate Matter PM10, PM2.5, and noise in Cuenca canton".

### Teaching Assistant - Carrera de Ingeniería Ambiental - Facultad de Ciencias Químicas

UNIVERSIDAD DE CUENCA

Cuenca, EC

03, 2012 - 07, 2015

- Introduction to Physics and Remote Sensing courses for the Environmental Engineering Career from Universidad de Cuenca.

### Internship - Grupo de Investigación de Ciudades Sustentables Llaclalab - Departamento Interdisciplinario de Espacio y Población

UNIVERSIDAD DE CUENCA

Cuenca, EC

05, 2015 - 06, 2015

- Cartographic data gathering organization, topographic correction and categorization of urban land uses, scientific papers analysis for bibliographic review.

### Internship - Departamento de Recursos Hídricos y Ciencias Ambientales (iDRHICA)

UNIVERSIDAD DE CUENCA

Cuenca, EC

07, 2014 - 09, 2014

- Assess the functioning state of Davis Station sensors, identify similarities and differences of two river basins hydrograms, analyze the effects of temperature and relative humidity on reference evapotranspiration calculation.

### Mapping and monitoring of landslide-dammed lakes using Sentinel-2 time series -a case study after the 2016 Kaikoura Earthquake in New Zealand

Conference Proceedings

EGU GENERAL ASSEMBLY 2020

03, 2020

- Abad, L., Hölbling, D., Spiekermann, R., Dabiri, Z., Prasicek, G., Argentin, A.-L. (2020). Mapping and monitoring of landslide-dammed lakes using Sentinel-2 time series -a case study after the 2016 Kaikoura Earthquake in New Zealand. EGU General Assembly 2020. <https://doi.org/10.5194/egusphere-egu2020-572>

### Observation and Reporting of Landforms and Landscape Dynamics by Citizens

Conference Proceedings

EGU GENERAL ASSEMBLY 2020

03, 2020

- Hölbling, D., Hennig, S., Abad, L., Ecke, S., Tiede, D. (2020). Observation and Reporting of Landforms and Landscape Dynamics by Citizens. EGU General Assembly 2020. <https://doi.org/10.5194/egusphere-egu2020-13593>

### Mapping and Analyzing the Evolution of the Butangbunasi Landslide Using Landsat Time Series with Respect to Heavy Rainfall Events during Typhoons

Journal Article

APPLIED SCIENCES, MDPI

01, 2020

- Hölbling, D., Abad, L., Dabiri, Z., Prasicek, G., Tsai, T.-T., Argentin, A.-L. Mapping and Analyzing the Evolution of the Butangbunasi Landslide Using Landsat Time Series with Respect to Heavy Rainfall Events during Typhoons. Applied Sciences. 2020, 10, 630. <https://doi.org/10.3390/app10020630>

### An Object-Based Approach for Monitoring the Evolution of Landslide-dammed Lakes and Detecting Triggering Landslides in Taiwan

Journal Article

ISPRS - INTERNATIONAL ARCHIVES OF THE PHOTOGRAMMETRY, REMOTE SENSING AND SPATIAL INFORMATION SCIENCES

09, 2019

- Dabiri, Z., Hölbling, D., Abad, L., Prasicek, G., Argentin, A.-L., Tsai, T.-T. (2019). An Object-Based Approach for Monitoring the Evolution of Landslide-dammed Lakes and Detecting Triggering Landslides in Taiwan. ISPRS - International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, XLII-3/W8, 103–108. <https://doi.org/10.5194/isprs-archives-XLII-3-W8-103-2019>

### Assessment of Landslide-Induced Morphology Changes using an Object-Based Image Analysis Approach: A Case Study of Hitardalur, Iceland

Journal Article

ISPRS - INTERNATIONAL ARCHIVES OF THE PHOTOGRAMMETRY, REMOTE SENSING AND SPATIAL INFORMATION SCIENCES

09, 2019

- Dabiri, Z., Hölbling, D., Abad, L., Tiede, D. (2019). Assessment of Landslide-Induced Morphology Changes using an Object-Based Image Analysis Approach: A Case Study of Hitardalur, Iceland. ISPRS - International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, XLII-3/W8, 109–114. <https://doi.org/10.5194/isprs-archives-XLII-3-W8-109-2019>

### Technological solutions for contributory citizen science: experiences from citizenMorph

Journal Article

PROCEEDINGS OF SCIENCE

06, 2019

- Hennig, S., Abad, L., Hölbling, D. (2019). Technological solutions for contributory citizen science: experiences from citizenMorph. Proceedings of Science, (ACSC2019)005, 26–28. <https://pos.sissa.it/366/005/pdf>

### Quantifying Bicycle Network Connectivity in Lisbon Using Open Data

Journal Article

INFORMATION, MDPI

11, 2018

- Abad, L., van der Meer, L. (2018). Quantifying Bicycle Network Connectivity in Lisbon Using Open Data. Information, 9(11), 14. <https://doi.org/10.3390/info9110287>

### Exploratory analysis of volunteer cyclists behavior through spatio-temporal patterns mining in Cuenca, Ecuador

Journal Article

MASKANA

06, 2018

- Abad, L., Orellana, D. (2018). Análisis exploratorio de comportamientos de ciclistas voluntarios mediante minería de patrones espacio-temporales en Cuenca, Ecuador. Maskana, 9(1), 141-151.

## Education

### Westfälische Wilhelms-Universität Münster

Münster, DE

ERASMUS MUNDUS MSc. GEOSPATIAL TECHNOLOGIES

2018 - 2019

- S2 2018: covering Cartography, Reference Systems, Spatial Data Science with R, Unmanned Aerial Systems
- S3 2018: Masters Thesis: Validating a bike network analysis score based on open data as a connectivity measure of urban cycling infrastructure adapted for European cities. Supervised by Prof. Dr. Edzer Pebesma. URL: <http://hdl.handle.net/10362/67511>

### Universidade Nova de Lisboa

Lisbon, PT

ERASMUS MUNDUS MSc. GEOSPATIAL TECHNOLOGIES

2017 - 2019

- S1, 2017: covering Geospatial Data Mining, Geostatistics, Remote Sensing, Geographic Information Science, Python programming.
- More info: [mastergeotech.info](http://mastergeotech.info)

### Universidad de Cuenca

Cuenca, EC

ENVIRONMENTAL ENGINEER BSc.

2011 - 2016

- Covering Cartography, Remote Sensing, Ecology, Hydrology, Meteorology and Climatology, Environmental Studies, Natural Resources Management, among 66 subjects during 10 semesters.
- Bachelor Thesis (in spanish): Particulate Matter less than 10 microns concentration estimation through Remote Sensing in the Urban Area of Cuenca city. Supervised by Danilo Mejía Coronel. URL: <http://dspace.ucuenca.edu.ec/handle/123456789/25484>
- More info: [ucuenca.edu.ec](http://ucuenca.edu.ec)

## Current Projects

### STEC

SMARTER TARGETING OF EROSION CONTROL

[NZ](#)  
2018 - 2023

### MontEO

THE IMPACT OF MASS MOVEMENTS ON ALPINE TRAILS AND HUTS ASSESSED BY EO DATA

[AT](#)  
2020 - 2021

### RiCoLa

DETECTION AND ANALYSIS OF LANDSLIDE-INDUCED RIVER COURSE CHANGES AND LAKE FORMATION

[AT, NZ, TW](#)  
2017 - 2020

### citizenMorph

OBSERVATION AND REPORTING OF LANDSCAPE DYNAMICS BY CITIZENS

[AT, DE, IS](#)  
2018 - 2020

### MORPH

MAPPING, MONITORING AND MODELLING THE SPATIO-TEMPORAL DYNAMICS OF LAND SURFACE MORPHOLOGY

[IS](#)  
2016 - 2020

### sfnetworks

TIDY GEOSPATIAL NETWORKS IN R – R PACKAGE

2019 - Ongoing

## Skills

### TECHNICAL SKILLS

#### Coding Languages

R – SQL – TEX – PYTHON

#### Software

QGIS – ARCGIS – SAGA – ECOGNITION – MICROSOFT OFFICE – GIMP – MENDELEY

#### Integrated Development Environment (IDE)

RSTUDIO – EARTH ENGINE CODE EDITOR

#### Version Control

GIT

### LANGUAGES

Skill	Spanish	English	French	Portuguese	German	Dutch
Reading	<a href="#">Native</a>	<a href="#">C2</a>	<a href="#">B2</a>	<a href="#">B1</a>	<a href="#">A2</a>	<a href="#">A1</a>
Writing	<a href="#">Native</a>	<a href="#">C1</a>	<a href="#">B2</a>	<a href="#">B1</a>	<a href="#">A1</a>	<a href="#">A1</a>
Listening	<a href="#">Native</a>	<a href="#">C2</a>	<a href="#">B2</a>	<a href="#">B1</a>	<a href="#">A2</a>	<a href="#">A1</a>
Speaking	<a href="#">Native</a>	<a href="#">C2</a>	<a href="#">B2</a>	<a href="#">B1</a>	<a href="#">A2</a>	<a href="#">A1</a>

Common European Framework of Reference for Languages: A1/A2: Basic User. B1/B2: Independent User. C1/C2: Proficient User

## Distinctions

2018	Benigno Malo Prize - University Honors Award	<a href="#">Universidad de Cuenca</a>
2018	AGILE 2018 conference - travel grant	<a href="#">AGILE &amp; ESRI</a>
2017	Erasmus Mundus Scholarship	<a href="#">European Commission</a>
2015	Best Scientific Poster - 2nd International Summer School “The Biodiversity of Genes, Species and Ecosystems”	<a href="#">Universität Osnabrück</a>
2014 - 2016	Vanguardia Honors Program	<a href="#">Universidad de Cuenca</a>