Lorena Abad

SS RESEARCHER | ENVIRONMENTAL ENGINEER | MSC. GEOSPATIAL TECHNOLOGIES
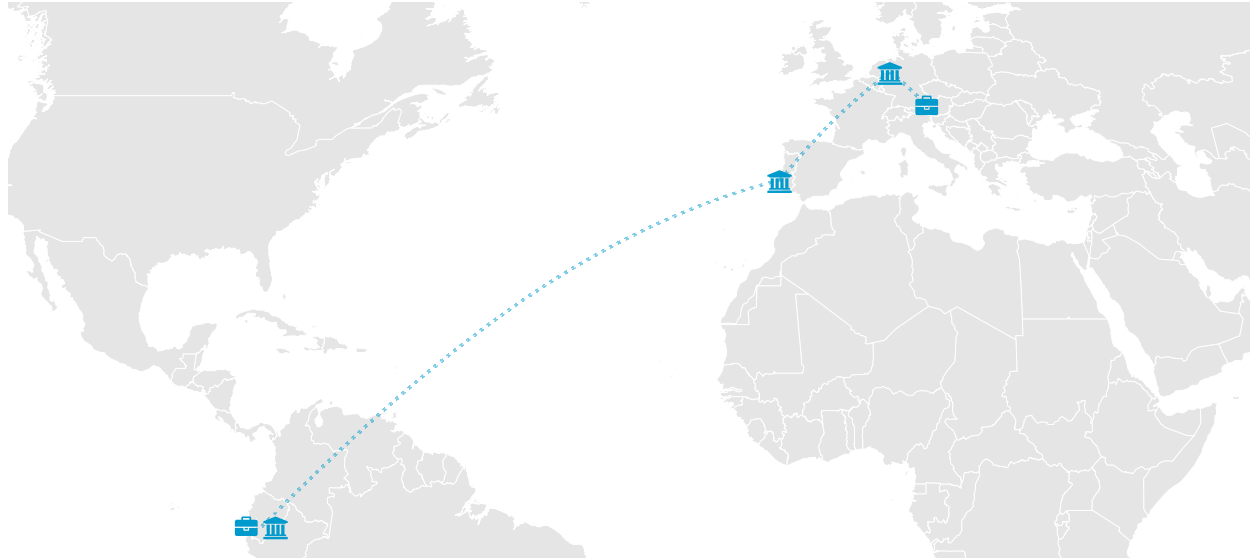
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✈ My journey

💼 Professional Experience

Researcher - Department of Geoinformatics - Z_GIS   *Salzburg, AT*
UNIVERSITY OF SALZBURG   *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 Llactalab -   *Cuenca, EC*
Departamento Interdisciplinario de Espacio y Población
UNIVERSIDAD DE CUENCA   *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   *Cuenca, EC*
UNIVERSIDAD DE CUENCA   *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   *Cuenca, EC*
UNIVERSIDAD DE CUENCA   *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   *Cuenca, EC*
UNIVERSIDAD DE CUENCA   *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   *Cuenca, EC*
UNIVERSIDAD DE CUENCA   *03, 2012 - 07, 2015*
- Introduction to Physics and Remote Sensing courses for the Environmental Engineering Career from Universidad de Cuenca.

Intership - Grupo de Investigación de Ciudades Sustentables Llactalab - Departamento   *Cuenca, EC*
Interdisciplinario de Espacio y Población
UNIVERSIDAD DE CUENCA   *05, 2015 - 06, 2015*
- Cartographic data gathering organization, topographic correction and categorization of urban land uses, scientific papers analysis for bibliographic review.

Intership - Departamento de Recursos Hídricos y Ciencias Ambientales (iDRHICA)   *Cuenca, EC*
UNIVERSIDAD DE CUENCA   *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.

📄 Selected Publications ─────────────────────────────

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*

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*

💡 Projects ─────────────────────────────────

🛰 Research projects

STEC   *NZ*
Smarter Targeting of Erosion Control   *2018 - 2023*

MontEO   *AT*
The impact of mass movements on alpine trails and huts assessed by EO data   *2020 - 2021*

RiCoLa   *AT, NZ, TW*
Detection and Analysis of Landslide-induced River Course Changes and Lake Formation   *2017 - 2020*

citizenMorph   *AT, DE, IS*
Observation and Reporting of Landscape Dynamics by Citizens   *2018 - 2020*

MORPH   *IS*
Mapping, Monitoring and Modelling the Spatio-Temporal Dynamics of Land Surface Morphology   *2016 - 2020*

💻 Programming projects

sfnetworks   *R Package*
Tidy Geospatial Networks in R

BNA-EU   *RMarkdown Reporting*
Bicycle Network Analysis Score for UK and NL

🧠 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	Native	C2	B2	B1	A2	A1
Writing	Native	C1	B2	B1	A1	A1
Listening	Native	C2	B2	B1	A2	A1
Speaking	Native	C2	B2	B1	A2	A1

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	*Universidad de Cuenca*
2018	AGILE 2018 conference - travel grant	*AGILE & ESRI*
2017	Erasmus Mundus Scholarship	*European Commission*
2015	Best Scientific Poster - 2nd International Summer School "The Biodiversity of Genes, Species and Ecosystems"	*Universität Osnabrück*
2014 - 2016	Vanguardia Honors Program	*Universidad de Cuenca*