

Eurac Research

INSTITUTE FOR EARTH OBSERVATION
VIALE DRUSO 1 - 39100 BOLZANO

Tuesday 5th February, 2019

Job Application for Junior researcher within ECOPOTENTIAL project

Dear Mrs. Winkler,

I write to you regarding the open position as a Junior researcher within the ECOPOTENTIAL project listed on your website. I would like to start by introducing myself. My name is Lorena Abad, I am an environmental engineer from Cuenca, Ecuador, studying a masters in Geospatial Technologies, on the final stage of my masters thesis, expecting completion by the end of this month.

As I read the job offer description I felt that my previous studies, along with my work experience, matched accurately the requirements listed. Furthermore, finding such a position for my study levels fits perfectly with my personal motivation to pursue a career in science, research, and academia. Therefore, I would like to point out the main highlights in my career that led me into believing that I would make a good candidate for the job.

Before starting my bachelor, I already felt passionate about the environment. My hometown, in a valley between mountains was an ideal setting to start exploring the world around me, and the high biodiversity in my country, Ecuador, did only but increase my interest in the field. As part of my bachelor studies, I covered a wide range of topics which included among others Microbiology, Biology, and Ecology. I reinforced my knowledge on this field during a Summer School in Biodiversity which I attended in the University of Osnabrück in 2015. Later on, courses on Cartography and Remote Sensing caught my attention and motivated me to pursue a path in GIS-related fields, as tools to study and improve the environment.

I took a first step with my bachelor thesis, where I investigated the use of satellite imagery to estimate air pollution in urban environments. My supervisor by then, a Biologist specialized in Geomatics, invited me to collaborate with him in other projects related to his field, that became part of my early job experience. It was then that I familiarized myself with species distribution modelling, as part of a project to study and recover endangered amphibian habitats in my city. I first performed modelling tasks using the software MaxEnt, and then was in charge of the in-situ water and air quality monitoring of artificial habitats selected by the results of the distribution modelling. The project became a big success and has shown already recovery of the urban fauna.

I realized with this short experience, that many of my interests had a common core, Geospatial Technologies, which drove me into applying to the Erasmus Masters I am pursuing currently. This masters did not only enriched my knowledge in several theoretical topics such as geographic information science, remote sensing, cartography, among others, but also reinforced my programming skills. R has become my preferred programming language and I am very comfortable in using it for different tasks from spatial to statistical analyses, as well as data visualization.

Along this journey, I have had the opportunity to work within different research groups, composed by people with multiple professional qualifications encompassing various disciplines, as well as cultural backgrounds, which was consolidated during my international masters studies. In addition, I had the chance to publish my work in journals indexed on LatinIndex and Scopus databases. This has improved my academic writing skills, and my ability to communicate the results of my work.

On a personal note, I believe my skills as a researcher are accompanied by my team work and organizational skills, along with my reliability and responsibility. To finalize I would like to add that working in a prestigious academic institution in my field, such as Eurac will certainly be of great gratification for my personal goals. I sincerely hope to be considered for the position and to discuss further during an interview.

Thank you in advance for your consideration.

Sincerely,

Lorena Abad

Attached

Curriculum Vitae

Transcript of Records of Erasmus Mundus MSc. Geospatial Technologies as proof of progress.

Compliance declaration

I have read the privacy policy under <http://www.eurac.edu/en/aboutus/Jobs/Pages/default.aspx> and hereby authorize Eurac Research to use my personal data in accordance to decree 196/2003.

I hereby explicitly authorize Eurac Research to store my personal data for the purpose of being contacted for potential future job openings.



Lorena Abad

MSC. GEOSPATIAL TECHNOLOGIES SECOND YEAR STUDENT

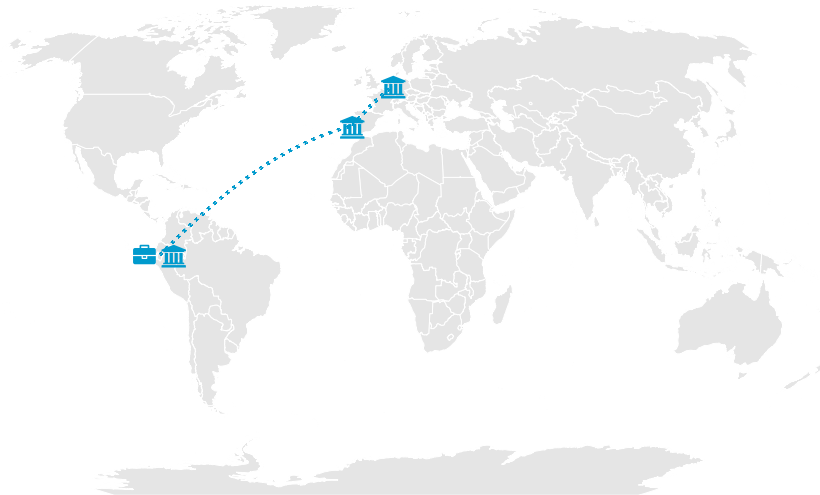
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Professional summary

I am an environmental engineer from Cuenca, Ecuador finishing my studies for an Erasmus Mundus Master of Science in Geospatial Technologies, expected by March 2019. My research scope includes spatial data analysis, particularly focused on R programming; remote sensing and earth observation data analysis, specially optical satellite imagery applied to environmental studies and analyses such as air pollution, land use/land cover change; geostatistical analysis of climate data; and ecological modelling. I feel very keen to pursue a career in research, science, and academia.

My journey



Education

Westfälische Wilhelms-Universität Münster

Münster, Germany

ERASMUS MUNDUS MSC. GEOSPATIAL TECHNOLOGIES

2018 - Present

- 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.
- More info: mastergeotech.info

Universidade Nova de Lisboa

Lisbon, Portugal

ERASMUS MUNDUS MSC. GEOSPATIAL TECHNOLOGIES

2017 - Present

- S1, 2017: covering Geospatial Data Mining, Geostatistics, Remote Sensing, Geographic Information Science, Python programming.
- More info: mastergeotech.info

Universidad de Cuenca

Cuenca, Ecuador

ENVIRONMENTAL ENGINEER BSC.

2011 - 2016

- Covering Biology, Ecology, Hydrology, Meteorology and Climatology, Environmental Studies, Natural Resources Management.
- Among 66 subjects during 10 semesters.
- More info: ucuenca.edu.ec

Universität Osnabrück

Osnabrück, Germany

BIODIVERSITY SUMMER SCHOOL: THE DIVERSITY OF ECOSYSTEMS, GENES AND SPECIES

2015

- More info: uni-osnabrueck.de

Universidad de Cuenca

Cuenca, EC

RESEARCH ASSISTANT - GRUPO DE INVESTIGACIÓN DE CIUDADES SUSTENTABLES LLACTALAB - DEPARTAMENTO

05, 2017 - 08, 2017

INTERDISCIPLINARIO DE ESPACIO Y POBLACIÓN

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

Universidad de Cuenca

Cuenca, EC

TECHNICAL ASSISTANT - CARRERA DE INGENIERÍA AMBIENTAL - FACULTAD DE CIENCIAS QUÍMICAS

09, 2016 - 08, 2017

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

Universidad de Cuenca

Cuenca, EC

RESEARCHER - CARRERA DE INGENIERÍA AMBIENTAL - FACULTAD DE CIENCIAS QUÍMICAS

10, 2016 - 01, 2017

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

Universidad de Cuenca

Cuenca, EC

RESEARCH ASSISTANT - CARRERA DE INGENIERÍA AMBIENTAL - FACULTAD DE CIENCIAS QUÍMICAS

03, 2016 - 07, 2016

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

Universidad de Cuenca

Cuenca, EC

TEACHING ASSISTANT - CARRERA DE INGENIERÍA AMBIENTAL - FACULTAD DE CIENCIAS QUÍMICAS

03, 2012 - 07, 2015

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

Universidad de Cuenca

Cuenca, EC

INTERSHIP - GRUPO DE INVESTIGACIÓN DE CIUDADES SUSTENTABLES LLACTALAB - DEPARTAMENTO INTERDISCIPLINARIO DE

ESPACIO Y POBLACIÓN

05, 2015 - 06, 2015

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

Universidad de Cuenca

Cuenca, EC

INTERSHIP - DEPARTAMENTO DE RECURSOS HÍDRICOS Y CIENCIAS AMBIENTALES (IDRHICA)

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.

Publications

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.

Potential distribution of the Polylepis genus in the Paute river basin under a climate change scenario

Journal Article

REVISTA DE LA FACULTAD DE CIENCIAS QUÍMICAS

12, 2018

- Mejía-Coronel, D., Tonón, M., & Abad, L. (2018). Distribución Potencial del Género Polylepis en la Cuenca del Río Paute bajo un Escenario de Cambio Climático. Revista de La Facultad de Ciencias Químicas., December(19), 21-37.

Water quality and environmental variables in endangered amphibia habitats in Cuenca urban area

Journal Article

REVISTA DE LA FACULTAD DE CIENCIAS QUÍMICAS

11, 2017

- Abad, L., Mejía, D., León, P., Cárdenas, I., Pacheco, B., & Tonón, M. (2017). Calidad del Agua y Variables Ambientales en Hábitats para Anfibios Amenazados en la Zona Urbana de Cuenca. Revista de La Facultad de Ciencias Químicas. Universidad de Cuenca.

Particulate Matter less than 10 microns concentration estimation through Remote Sensing in the Urban Area of Cuenca city

Conference Proceedings

XVI CONFERENCIA DE SISTEMAS DE INFORMACIÓN GEOGRÁFICA

09, 2017

- Abad, L., & Mejía-Coronel, D. (2017). Estimación De La Concentración De Material Particulado Menor a 10 Micras a Través De Sensores Remotos En El Área Urbana De La Ciudad De Cuenca. In XVI Conferencia de Sistemas de Información Geográfica (pp. 381-390). Cuenca, Ecuador: Universidad del Azuay.

2018	Benigno Malo Prize - University Honors Award
2017	Erasmus Mundus Scholarship
2014 - 2016	Vanguardia Honors Program

Universidad de Cuenca

European Commission

Universidad de Cuenca

Personal Skills

TECHNICAL SKILLS

	Coding Languages		Software
R	● ● ● ● ●	QGIS	● ● ● ● ●
SQL	● ● ● ● ●	ArcGIS	● ● ● ● ●
TeX	● ● ● ● ●	PostgreSQL/ PostGIS	● ● ● ● ●
Python	● ● ● ● ●	MaxEnt	● ● ● ● ●
		ENVI	● ● ● ● ●

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

Referees

Prof. Dr. Edzer Pebesma

+49 251 83-33081

@edzer.pebesma@uni-muenster.de

✉ Institute for Geoinformatics,
Heisenbergstraße 2, 48149,
Münster, Germany

Prof. Dr. Marco Painho

+351 213 871 573

@painho@novaims.unl.pt

✉ NOVA Information Management School
Campus de Campolide, 1070-312
Lisbon, Portugal

Prof. Dr. Daniel Orellana

(593 7) 4051000 Ext. 2112

@daniel.orellana@ucuenca.edu.ec

✉ Grupo de Investigación LlaetaLAB
Av. 12 de Abril y Agustín Cueva, 010203
Cuenca, Ecuador

Transcript of Records
Degree Name: Master of Science in Geospatial Technologies
Student number: 20170518 - Lorena Abad

This content is merely indicative and has no legal effect.

NOVA IMS

Curricular Unit	Date	Grade	In full	ECTS	University
Academic Year: 2017-18					
Remote Sensing	08-01-2018	19	Nineteen Points	7,5	Universidade Nova de Lisboa-Portugal
Geostatistics	08-01-2018	19	Nineteen Points	7,5	Universidade Nova de Lisboa-Portugal
Geospatial Data Mining	10-01-2018	19	Nineteen Points	7,5	Universidade Nova de Lisboa-Portugal
Geographic Information Science	16-01-2018	19	Nineteen Points	7,5	Universidade Nova de Lisboa-Portugal
Group Project Seminar	27-02-2018	20	Twenty Points	6	Universidade Nova de Lisboa-Portugal
Portuguese	27-02-2018	17	Seventeen Points	4	Universidade Nova de Lisboa-Portugal
Advanced GIS - Methods in Digital Cartography	09-07-2018	20	Twenty Points	5	Westfälische Wilhelms Universität Münster-Germany
Spatial Data Science with R	16-07-2018	20	Twenty Points	5	Westfälische Wilhelms Universität Münster-Germany
Reference Systems for Geographic Information	19-07-2018	18	Eighteen Points	5	Westfälische Wilhelms Universität Münster-Germany
Unmanned Aerial Systems	20-07-2018	18	Eighteen Points	5	Westfälische Wilhelms Universität Münster-Germany
Advanced Research Methods and Skills	20-07-2018	20	Twenty Points	3	Westfälische Wilhelms Universität Münster-Germany
Geospatial Technologies: Transferring Data to Knowledge	09-08-2018	17	Seventeen Points	5	Westfälische Wilhelms Universität Münster-Germany

(1) Description of the institutional grading system:

The result achieved in a course unit, whether through continuous assessment or in an examination, is generally expressed in a 0 to 20 grading scale.

The lowest passing grade is 10.