

JULIANA MESA

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Summary of qualifications

- Extensive research experience in thermochronology, geochemistry and experimental petrology
- Ability to work in a team as well as organizational and leadership skills to coordinate and execute projects

Education

PhD Candidate in Earth and Environmental Sciences - University of Michigan (Ann Arbor)

September 2016 – Present

Projects: Evidence of rapid growth of olivine in unusually oxidized intraplate melts from Western Mexico
Understanding the origin of plagioclase megacrysts in basalts

Master in Earth Sciences - EAFIT University (Medellín, Colombia)

February 2013 – April 2015

Project: Combia volcanism: Miocene immature arc magmatism?

Bachelor of Sciences – Geology - EAFIT University (Medellin, Colombia)

January 2008 - December 2012

Project: Amaga Formation in La Loma – 1 well and Sabaleticas section: Diagenetically immature succession of Eocene
– Miocene time using multi – tool analysis

Work experience

Graduate student instructor (GSI) for EARTH 120: Introduction to Geology - University of Michigan

Fall term 2017, Summer term 2018.

- Attended lectures and assisted with course planning to have a better understanding of the material
- Planned lab sections and offered office hours on a weekly basis to help the students apply the knowledge acquired in the lectures
- Graded student lab assignments following the rubric established for the course

Quarry geologist –Soluciones en Geología y Minería – SGMM and ARGOS

April 2015 – June 2016.

- Supervised the Pozzolan Exploration Project for ARGOS cement company in Honduras (surveys/studies were executed by third parties).
- Assessed, ranked and selected proposals based on an evaluation system designed by ARGOS
- Coordinated the occupational safety and health training and evaluations which included close interaction with the project coordinators and their employees
- Oversaw the topographic, geological, hydrological and geotechnical surveys/studies, and the drilling/logging campaign, by getting the access to the field permits, assisting the contractors in the field, and closely following up on the different stages of each project
- Monitored the budget and examined the reports to present updates to the project coordinator and geology department leader

Auxiliary worker – EAFIT University and Colombian Geological Survey (Servicio Geológico Colombiano)

April 2013 – August 2014

- Summarized data collected by the field geologists for assessment of geomorphological and landslide hazards in northwestern Colombia
- Edited final reports by collecting and organizing the information, figures and photos created by the field geologist, environmental engineers and GIS analysts.

Geoscience intern – ISTerre – Joseph Fourier University (Grenoble, France)

November – December 2013.

- Prepared and analyzed volcanic samples collected in Colombia to measure major and trace elements, and isotope systematics compositions
- Edited and plotted data for geochemical interpretation of magma source and evolution

Geoscience Intern – Geophysical Laboratory – Carnegie Institution of Science (Washington, D.C.)

January – July 2012.

- Prepared and analyzed synthetic samples simulating Mars compositions to understand core-mantle differentiation by performing high-temperature and high-pressure experiments using a multianvil apparatus and piston cylinder
- Worked on a clean lab to prepare samples for MC-ICPMS analyses
- Published research results as co-author on the *Geochimica and Cosmochimica Acta*

Honors & Awards

- Scott Turner Award in Earth Sciences – University of Michigan, 2018
- Rackham Conference Travel Grant – University of Michigan, 2017, 2018, 2019
- Scholarship for graduate studies – EAFIT University, 2013 – 2014
- Scholarship for best undergraduate student – EAFIT University, 2008

Research publications

- Marín-Cerón M.I., Leal-Mejía H., Bernet M., Mesa-García J. (2019) Late Cenozoic to Modern-Day Volcanism in the Northern Andes: A Geochronological, Petrographical, and Geochemical Review. In: Cedié F., Shaw R.P. (eds) *Geology and Tectonics of Northwestern South America*. *Frontiers in Earth Sciences*. Springer, Cham. pp. 603-648. https://doi.org/10.1007/978-3-319-76132-9_8
- Shahr, A., Hillgren, V.J., Horan, M.F., Mesa-Garcia, J., Kaufman, L.A., Mock, T.D. 2014. Sulfur-controlled iron fractionation experiments of core formation in planetary bodies. *Geochim. Cosmochim. Acta*. v. 150, pp. 253-264 <http://dx.doi.org/10.1016/j.gca.2014.08.011>

Skills Summary

Analytical techniques: Cameca SX-100 electron microprobe, Field emission scanning electron microscope (SEM), 1-bar gas-mixing furnace experiments, AFT and ZFT analysis

Languages: Spanish (native), English (full Professional working proficiency)