

Delphine R. N.
SOURISSEAU

Doctor in Earth Sciences

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Female, 30 years old, French nationality

Formations and diplomas

- March 2022 to present **Postdoctoral researcher in volcanology**, *Instituto de Geología (IGL)*, *Universidad Nacional Autónoma de México (UNAM)*, Ciudad de México, MEXICO .
Below the supervision of Dr. José Luis Arce Saldaña (jlarce@geologia.unam.mx)
Theme: **The two last explosive eruptions of the Primavera caldera, that occurred between 44.7 ka and the present.**
Objectives: Describe the La Primavera pyroclastic units, establish their distribution and stratigraphic order, constrain their ages using the $^{230}\text{Th}/\text{U}$ and C^{14} radiometric dating methods, define their major and trace element composition using in-situ and whole-rock geochemical analysis, and use the relations between the pyroclastic units and volcanic centers to improve the evolution model of the La Primavera volcanic complex.
Degree date: May 7th 2021
- August 2015 to May 2021 **Ph.D. in Earth Sciences**, *Instituto de Geofísica Unidad Michoacán (IGUM)*, *Universidad Nacional Autónoma de México (UNAM)*, Morelia, MEXICO .
Thesis below the supervision of Dr. José Luis Macías Vázquez (jlmacias@igeofisica.unam.mx)
Comitee: Dr. José Luis Arce Saldaña (jlarce@geologia.unam.mx) and Dr. Giovanni Sosa Ceballos (giovannis@igeofisica.unam.mx)
Theme: **Plinian eruptions associated to the post-activity of La Primavera, Mexico.**
Objectives: Describe the La Primavera pyroclastic units, establish their distribution and stratigraphic order, constrain their ages using the $^{230}\text{Th}/\text{U}$ and C^{14} radiometric dating methods, define their major and trace element composition using in-situ and whole-rock geochemical analysis, and use the relations between the pyroclastic units and volcanic centers to improve the evolution model of the La Primavera volcanic complex.
Degree date: May 7th 2021
- 2011 to 2013 **Master's Degree in Earth Sciences, Magmas and Volcanoes Speciality**, *Université Clermont Auvergne (UCA) (Université Blaise Pascal Clermont-Ferrand II before 2017)*, Clermont-Ferrand, FRANCE .
2nd year thesis below the supervision of Dr. Patrick Bachèlery
Place: Laboratoire Magmas et Volcans (LMV), Clermont-Ferrand, FRANCE
Theme: **Geochemical, textural and petrological characterization of the ERODER 4 sea campaign dredged samples around the La Réunion Island. Synthesis with the ERODER 2 and GEISER 2 sea campaigns.**
1st year thesis below the supervision of Dr. John Murray and Dr. Benjamin van Wyk de Vries
Place: Department of Environment, Earth and Ecosystems, Open University, Milton Keynes, UNITED KINGDOM
Theme: **Variations in spreading rates at Mount Etna volcano.**
Degree date: September 18th 2013
- 2010 to 2011 **Bachelor's Degree in Earth Sciences**, *Université Clermont Auvergne (UCA) (Université Blaise Pascal Clermont-Ferrand II before 2017)*, Clermont-Ferrand, FRANCE.
Degree date: June 9th 2011
- 2008 to 2010 **Associate's Degree in Earth Sciences and Environment**, *Université de Pau et des Pays de l'Adour (UPPA)*, Pau, FRANCE.

Courses and workshops

December 6-15th 2021 **Machine Learning para la mejora de la enseñanza aplicado a la Ciencia de Datos**, *Diplomado en Aprendizaje Maquina y Profundo aplicado a Grandes Volúmenes de Datos*.

Place: Universidad Nacional Autónoma de México, Morelia, MEXICO

Participation: Assistant (30 hours)

November 13-22th 2017 **XXIV Edition of the International Volcanology Fieldwork course of the Central Andes**.

Place: National University of Salta, Natural Science Faculty, Salta, ARGENTINE

Participation: Assistant (80 hours)

August 19th 2017 **INTAV Workshop: Best practices in tephra collection, analysis, and reporting**.

Place: Portland, Oregon, U.S.A

Participation: Assistant

September 19th 2016 **XXVI conference course: Use of micro analytic techniques for LA-ICPMS: Theories and study cases**.

Place: Morelia, Michoacán, MÉXICO

Participation: Assistant

Publications

Stratigraphy and geochronology of the post-caldera explosive volcanism of the La Primavera Volcanic Complex, Mexico, *Sourisseau D., Macias J.L., Garcia Tenorio F., Ramón Avellan D., Saucedo Girón R., Bernal J.P., Arce Saldaña J.L., Tinoco Murillo Z.*, Journal of South American Earth Sciences, 2020.

Factor H: 1 - Citation: 2 (04/08/2021), <https://doi.org/10.1016/j.jsames.2020.102747>

Petrology and geochemistry of the post-caldera pyroclastic units from La Primavera caldera, Jalisco, Mexico., *Sourisseau D., Macias J.L., Arce Saldaña J.L., Sosa Ceballos G., Garcia Tenorio F.*, in preparation.

Conferences

June 12-17th 2022 **Cities on Volcanoes 11**.

Poster title: The last explosive eruption of La Primavera caldera, Jalisco, Mexico. Place: Heraklion, CRETE

September 2-7th 2018 **Cities on Volcanoes 10**.

Poster title: Stratigraphy of the post-caldera explosive volcanism of the La Primavera Caldera Volcanic Complex, Jalisco, Mexico. [\[Link\]](#)

Place: Naples, ITALY

August 14-18th 2017 **IAVCEI 2017**.

Poster title: Stratigraphy of the post-caldera explosive volcanism of the La Primavera Caldera, Jalisco, Mexico. [\[Link\]](#)

Place: Portland, Oregon, U.S.A

October 30th to November 4th 2016 **2016 Annual Reunion of the Mexican Geophysics Union**.

Conference title: Plinian eruptions associated to the post-caldera activity of the La Primavera, Jalisco.

Place: Puerto Vallarta, Jalisco, MÉXICO

September 19-23th 2016 **XXVI National Chemistry Conference**.

Conference title: Plinian eruptions associated to the post-caldera activity of the La Primavera, Jalisco.

Place: Morelia, Michoacan, MÉXICO

Volunteer

September to december 2014 **Colima volcano monitoring and data analysis**, *CIIV, Faculty science, Universidad de Colima*, Colima, MEXICO.

Below the supervision of Dr. Nick Varley

Place: Centro de intercambio e investigación en vulcanología (CIIV)

August 2012 **Etna volcano slopes deformation monitoring**, *Department Environment, Earth and Ecosystems, The Open University*, Milton Keynes, UNITED KINGDOM.

Below the supervision of Dr. John Murray

Place: Etna volcano

Field and laboratory competences

Sampling in the field

Dry grain size analyses

Sample preparation for geochemical analyses

Use of stereoscopic microscope, SEM, and EPMA

Computing competences

Writing of documents and presentations with Word, PowerPoint, and Latex

Data analysis with Excel, Python, and Matlab

Creation of georeferenced maps with ArcGis

Creation of graphics and figures with the CorelDRAW software design

Creation of web page with the Hugo framework

Use of Git

Languages

French Native language

English Level of proficiency - B2 - UNAM ENES languages center, Morelia (20/08/2018)

Spanish Level of proficiency - C1 - SIELE (12/06/2019): Total punctuation of 898/1000, reading comprehension 204/250, listening comprehension 217/250, written expression 240/250, oral expression 237/250

German Basic knowledge

Portuguese Basic knowledge

Investigation topics

Physical volcanology

Tephrochronology

Volcanic stratigraphy

Volcanic evolution

Geochemistry

Geochronology