Delphine SOURISSEAU

Doctor in Earth Sciences

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Female, 32 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 occured between 44.7 ka and the present.**

Objectives: Describe the pyroclastic deposits, establish their source and distribution, constrain their ages using the C^{14} radiometric dating method, define their major and trace element composition using in-situ and whole-rock geochemical analysis, and use the results obtained to describe the eruption dynamic.

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 $^{230}Th/U$ 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

January 28-29th 2023
Virtual workshop "From field apps to data repositories, Improving tephra data discoverability, access, and workflows to support next generation research, *IAVCEI tephra community*.
Place: IAVCEI Scientific Assembly 2023, Rotorua, New Zealand
Participation: Assistant

August 15th to September 2nd 2022
Modulo II y III. Aprendizaje profundo y grandes volúmenes de datos, *Diplomado en Aprendizaje Máquina y Profundo aplicado a Grandes Volúmenes de Datos*.
Place: Universidad Nacional Autónoma de México, Morelia, MEXICO
Participation: Assistant (60 hours)

February 10th to March 3rd 2022
Tephra Fusion 2022 virtual workshop series, *IAVCEI tephra community*.
Participation: Assistant

December 6-15th 2021
Modulo I. Aprendizaje automático (ML) para la mejora de la enseñanza aplicado a la Ciencia de Datos, *Diplomado en Aprendizaje Máquina 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: IAVCEI Scientific Assembly 2017, Portland, Oregon, U.S.A
Participation: Assistant

September 19th 2016
Use of micro analytic techniques for LA-ICPMS: Theories and study cases.
Place: XXVI National Chemistry Conference, Morelia, Michoacán, MEXICO
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: 5 (10/06/2023), https://doi.org/10.1016/j.jsames.2020.102747

Genesis and evolution of the post-caldera pyroclastic rhyolites from La Primavera caldera, Jalisco, Mexico: a crystal mush perspective., *Sourisseau D., Arce J.L., Macías J.L., Sosa Ceballos G., Garcia Tenorio F., Avellán D.R., Saucedo-Girón R., Sanchez-Nuñez J.M., Ocampo-Díaz Y.Z.E*, Journal of Volcanology and Geothermal Research, submitted.

The 6.4 ka hydromagmatic eruption at Colli Dome, La Primavera caldera, Jalisco, Mexico., *Sourisseau D., Arce J.L., Macías J.L., Garcia Tenorio F.*, in preparation.

Conferences

Abril 23-27th 2023
Convención Geológica Nacional 2023.
<u>Poster title:</u> Actividad explosiva del Holoceno en la caldera de La Primavera, Jalisco, México. [Link]
Place: Ciudad de México, MÉXICO

October 30th to November 4th 2022
Reunión Anual Unión Geofísica Mexicana 2022.
<u>Conference title:</u> Actividad explosiva del Holoceno en la caldera de La Primavera, Jalisco, México.
Place: Puerto Vallarta, Jalisco, MÉXICO

June 12-17th 2022
Cities on Volcanoes 11.
<u>Poster title:</u> The last explosive eruption of La Primavera caldera, Jalisco, Mexico. [Link]
Place: Heraklion, CRETE

September 2-7th 2018
Cities on Volcanoes 10.
<u>Poster title:</u> 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 Scientific 2017.
<u>Poster title:</u> 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
Reunión Anual Unión Geofísica Mexicana 2016.
<u>Conference title:</u> Erupciones plinianas asociadas a la actividad post-caldera de La Primavera, Jalisco.
Place: Puerto Vallarta, Jalisco, MEXICO

September 19-23th 2016
XXVI Congreso Nacional de Geoquímica.
<u>Conference title:</u> Erupciones plinianas asociadas a la actividad post-caldera de La Primavera, Jalisco.
Place: Morelia, Michoacán, MEXICO

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

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)
Level of proficiency - B2 - TOEFL IBT (25/01/2014): Total of 85/120, Reading 20/30, Listening 26/30, Speaking 18/30, Writing 21/30

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   **Volcanic evolution**
Tephrochronology   **Geochemistry**
Volcanic stratigraphy   **Geochronology**