

# Elodie BROTHELANDE

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**Curriculum**

- 2018-now:** Postdoctoral fellow (Volcanology) at Carnegie Institution of Washington
- 2016-2018: Postdoctoral fellow (Volcanology) at the University of Miami - RSMAS
- 2015-2016: Teaching assistant in Geology and Geophysics (BSc to MSc), at Université de Nantes (LPG) and Université Paris Sud (GEOPS)
- 2011-2015: PhD in Volcanology - Université B. Pascal, Clermont-Ferrand, France. *Defended on May 12<sup>th</sup>, 2015.*
- 2010-2011: MSc. 2<sup>nd</sup> year in Volcanology [Magmas and Volcanoes] at Univ. Blaise Pascal of Clermont-Ferrand and Univ. de la Réunion - magna cum laude
- 2009-2010: Sabbatical year, personal project (perception of volcanic risks in South America).
- 2008-2009: *Prép. à l'Agrégation* (High-level training for the competitive examination of French high school teachers) - at ENS Lyon – Examination Completed.
- 2007-2008: MSc. 1<sup>st</sup> year in Geology at ENS Lyon - magna cum laude
- 2006-2007: BSc. In Geology (Earth and Planets) at *Ecole Normale Supérieure de Lyon* (ENS Lyon, France – high level school for research and teaching) - magna cum laude

**Research Experience**

- 2018 - now:** (Postdoc) Link between deformation and eruption, Time-dependent damage modeling of volcanic edifices, Coupling of seismicity and deformation. Carnegie Inst. (with H. Le Mével and D. Roman)
- 2016 - 2018:** (Postdoc) Volcano interactions in Japan and Galapagos. Geodesy (GPS, InSAR) and deformation modeling. University of Miami (with F. Amelung)
- 2011 - 2015:** (PhD) Study of an active resurgent dome in the Siwi caldera, Tanna Island, Vanuatu. Structural geology, Photogrammetry, Geophysical methods (IR thermometry, Magnetism, Gravimetry, Electrical methods), Deformation modeling (analogue/numerical). LMV, Clermont-Ferrand, France (with J.-F. Lénat, O. Merle & A. Peltier).
- 2011:** (6-month internship): Structure and dynamics of the hydrothermal system of La Soufrière de Guadeloupe volcano inferred from Electrical resistivity tomography, Self-potential, thermometry and CO<sub>2</sub> measurements. Laboratoire Geosciences Réunion, Reunion Island, France (with A. Finizola, E. Delcher & A. Peltier).
- 2008:** (4-month internship): Determination of magmatic residence times of zoned phenocrysts beneath Mt Ngauruhoe and Mt Egmont by diffusion modeling. Victoria Uni. of Wellington, New Zealand (with. J. Baker).
- 2007:** (3-month internship): Structural and geochemical analyses of the deformed magma chamber of Piton des Neiges volcano, La Réunion Island. Laboratoire Geosciences Réunion, Reunion Island, France (with V. Famin & L. Michon).

**Field work campaigns**

- 2015** (3 weeks): Geophysical campaign on Etna (electrical methods and gas sampling)
- 2014** (3 weeks): Geophysical campaign on Vesuvius (electrical methods, thermometry)
- 2012** (1+2 months): Geophysical campaigns on Stromboli and Yasur volcanoes (electrical methods, magnetic survey, differential GPS).
- 2011** (1 month): Geophysical campaign on La Soufrière de Guadeloupe volcano (electrical methods, thermometry and complementary gas measurements).

**Computer and languages skills**

- Computer environments:** Windows, MacOS, Linux
- Computer programming:** Matlab, basics of C and Python (learning)
- Softwares:** COMSOL; Agisoft Photoscan; Surfer; ISCE; Adobe Suite, Microsoft Office suite
- Foreign Languages:** proficient (written and spoken) in English and Spanish

**Distinction**

PhD awarded the “Ami Boué” Prize (Solid Earth) by the Geological Society of France (SGF) in 2016