

## PERSONAL INFORMATION

[REDACTED]  
Citizenship: USA

## EDUCATION

**University of Hawai'i at Mānoa**, Honolulu, Hawai'i: Ph.D. in Geology & Geophysics (August, [REDACTED])  
Dissertation title: The flow character of Hawaiian basalt lavas. Dissertation advisor: George P.L. Walker.

**Oregon State University**, Corvallis, Oregon: BS in Geology (June, [REDACTED]), with honors.

**University of Hawai'i at Mānoa**, Honolulu, Hawai'i: Undergraduate student in general earth and physical sciences (September [REDACTED] to May [REDACTED])

## EMPLOYMENT

**11/04 to present**: Associate Specialist, then Specialist in the Dept. of Geology & Geophysics, University of Hawai'i at Mānoa. Duties include teaching and developing introductory and upper-division courses in Hawaiian Geology, Geologic Hazards, Geological Field Methods, Geological Remote Sensing, Hydrology, and Geographical Information Systems, and others. The Dept. Chair is Dr. Ken Rubin [REDACTED]

[REDACTED] Assistant, then Associate researcher in the Hawai'i Institute of Geophysics and Planetology, University of Hawai'i at Mānoa. Most work was volcanological, with Dr. Peter Mouginiis-Mark: [REDACTED], utilizing remotely-sensed data, teaching these techniques in numerous workshops, and doing field work in Hawai'i, the Galápagos, México, and Samoa. Other research concentrated on numerical models of cooling lava flows (with Dr. Andrew Harris and Harold Garbeil), and applying these models to various volcanoes on Earth and Mars. Teaching included for-credit courses (Intro. Geology, Geology of Hawai'i, Volcanology, Field Methods, Remote Sensing, Mineralogy), non-credit courses, workshops for teachers and international volcanologists, filling in for faculty on leave, presentations to schools, and leading 1 to 7-day field trips and workshops.

[REDACTED] Geologist for Dames & Moore, Honolulu (Glen Lau, supervisor: [REDACTED]) Work involved field analysis of drill cores, sub-surface contaminant detection and mapping, and construction monitoring.

[REDACTED] Instructor at Windward Community College, Hawai'i (Dave Krupp, coordinator: [REDACTED])  
I taught GG 200, The Geology of Hawai'i.

[REDACTED] Laboratory technician, US Geological Survey (Rob Zierenberg, supervisor: [REDACTED])  
Work involved processing sulfide and sulfate minerals (using wet chemistry and gas distillation) to prepare them for running on a mass-spectrometer.

[REDACTED] Geologist for Smith-Evernden Associates (Roberta Smith-Evernden, Owner: [REDACTED])  
Work entailed evaluation of existing and proposed homesites with regard to their soil conditions, drainage, flooding potential, and fault proximity.

[REDACTED] Instructor, Dept. of Geology & Geophysics, University of Hawai'i (Frank Peterson, Chairman: [REDACTED])  
I taught two sections of introductory geology (lectures and laboratories).

[REDACTED]: Graduate assistant conducting research on the rheology and morphology of Hawaiian lava flows. Research funded by NASA grant #NAGW-541 (George Walker, principal investigator: [REDACTED])  
Findings presented in 3 manuscripts and at AGU and GSA meetings. Field trips led to Maui and Hawai'i for USGS and GSA conferences. Research conducted on Lō'ihi (via ALVIN) in February, 1987.

[REDACTED]: Volunteer geologist at the Hawaiian Volcano Observatory. Work involved field measurements, observations, and data interpretation both during and between eruptions. Supervised by Christina Heliker: [REDACTED]  
[REDACTED]. I have collaborated with HVO on numerous occasions since then.

## PUBLICATIONS

- Harris AJL, Rowland SK (2015) Lava flows and rheology. *In* Sigurdsson H, Houghton B, McNutt SR, Rymer H, Styrx J, eds. Encyclopedia of Volcanoes, 2<sup>nd</sup> Edition.
- Harris AJL, Rowland SK (2015) FLOWGO 2012: An updated framework for thermorheological simulations of Channel-Contained lava. *In* Carey R, Cayol V, Poland M, and Weis D, eds., Hawaiian Volcanoes: From Source to Surface, Am Geophys Union Geophysical Monograph 208
- Blaney DL and 31 others (2014) Chemistry and texture of the rocks at Rocknest, Gale Crater: Evidence for sedimentary origin and diagenetic alteration. *J Geophys Res Planets*, 119:2109-2131, doi:10.1002/2013JE004590
- Kurz MD, Rowland SK, Curtice J, Saal AE, Naumann T (2014) Eruption rates for Fernandina Volcano: A new chronology at the Galápagos hotspot center. *In* Harpp KS, Mittlestaedt E, d'Ozouville N, Graham DW, eds. The Galapagos: A Natural Laboratory for the Earth Sciences, Am Geophys Union Geophysical Monograph 204
- Grotzinger JP and 71 others (2013) A habitable fluvio-lacustrine environment at Yellowknife Bay, Gale Crater, Mars. *Science* 343, 10.1126/science.1242777
- Stolper EM, Baker MB, Newcombe ME, Schmidt ME, Treiman AH, Cousin A, Dyar MD, Fisk MR, Gellert R, King PL, Seshin L, Maurice S, McLennan SM, Minitti ME, Perrett G, Rowland S, Sautter V, Wiens RC, MSL Science Team (2013) The petrochemistry of Jake\_M: A Martian mugearite. *Science* 341: DOI: 10.1126/science.1239463
- Edgett KS, Yingst RA, Ravine MA, Caplinger MA, Maki JN, Ghaemi FT, Schaffner JA, Bell JF, Edwards LJ, Herkenhoff KE, Heydari E, Kah LC, Lemmon MT, Minitti ME, Olson TS, Parker TJ, Rowland SK, Schieber J, Sullivan RJ, Sumer DY, Thomas PC, Jensen EH, Simmonds JJ, Sengstaken AJ, Willson RG, Goetz W (2012) Curiosity's Mars Hand Lens Imager (MAHLI) Investigation. *Space Science Reviews* DOI 10.1007/s11214-012-9910-4.
- Rowland SK, Mouginitis-Mark PJ, Fagents SA, (2011) NASA volcanology field workshops on Hawai'i: Part 1. Description and history. *In* Garry WB, Bleacher JE, eds., Analogs for Planetary Exploration: Geological Society of America Special Paper **483**: 401–434, doi:10.1130/2011.2483
- Mouginitis-Mark PJ, Fagents SA, Rowland SK, (2011) NASA volcanology field workshops on Hawai'i: Part 2. Understanding lava flow morphology and flow field emplacement. *In* Garry WB, Bleacher JE, eds., Analogs for Planetary Exploration: Geological Society of America Special Paper **483**: 435–448, doi:10.1130/2011.2483
- Rowland SK, Sparks RSJ (2009) A pictorial summary of the life and work of George Patrick Leonard Walker. *In*: Hoskuldsson A, Thordarson T, Larsen G, Self S, Rowland S, eds. The Legacy of George P.L. Walker, Special Publications of IAVCEI, **2**: 371–400, Geological Society, London.
- Rowland SK, Jurado-Chichay Z, Ernst GJ (2009) Pyroclastic deposits and lava flows from the 1759–1774 eruption of El Jorullo, México: Aspects of “violent strombolian” activity and comparison with Parícutin. *In*: Hoskuldsson A, Thordarson T, Larsen G, Self S, Rowland S, eds. The Legacy of George P.L. Walker, Special Publications of IAVCEI, **2**: 105-128, Geological Society, London.
- Harris AJL, Rowland SK (2009) Effusion Rate Controls on Lava Flow Length and the Role of Heat Loss: A Review. *In*: Hoskuldsson A, Thordarson T, Larsen G, Self S, Rowland S, eds. The Legacy of George P.L. Walker, Special Publications of IAVCEI, **2**: 33-51, Geological Society, London.
- Mouginitis-Mark PJ, Rowland SK (2008) Lava flows at Arsia Mons, Mars: Insights from a graben imaged by HiRISE. *ICARUS* 198:27-36.
- Kervyn M, Kervyn F, Goossens R, Rowland SK, Ernst GGJ (2007) Mapping volcanic terrain using high-resolution and 3D satellite remote sensing. *In*: Teeuw RM (ed) Mapping Hazardous Terrain using Remote Sensing. Geol. Soc. Lond. Spec Publ 283:5-30
- Mouginitis-Mark PJ, Harris AJL, Rowland SK (2007) Terrestrial analogs to the calderas of the Tharsis volcanoes on Mars, in: Chapman M (ed) The Geology of Mars: Evidence from Earth-Based Analogs. Cambridge Univ. Press: 71-94
- Bailey JE, Harris AJL, Dehn J, Calvari S, Rowland SK (2006) The changing morphology of an open lava channel on Mt. Etna. *Bull Volc* **68**:497-515
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- Rowland SK, Lockwood JP, Trusdell FA, Moore RB, Sako MK, Koyanagi RY, Kojima G (2005) Anatahan, Northern Mariana Islands: reconnaissance geological observations during and after the volcanic crisis of spring 1990, and monitoring prior to the May 2003 eruption. *J Volcanol Geotherm Res* **146**:26-59.

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- Harris AJL, Rowland SK (2001). FLOWGO: A kinematic thermo-rheological model for lava flowing in a channel. *Bull Volcanol* **63**:20-44.
- Rowland SK, Garbeil H (2000). The slopes of oceanic basalt volcanoes. in *Remote Sensing of Active Volcanism*, AGU Monograph **116**, PJ Mouginiis-Mark, JA Crisp, JH Fink, eds. pp. 223-247.
- Zimbelman JR, Fagents SA, Gregg TKP, Manley CR, Rowland SK (2000). Subaerial Terrestrial Volcanism: Eruptions in our own Backyard, in: *Environmental Effects on Volcanic Eruptions: From Deep Oceans to Deep Space* JR Zimbelman & TKP Gregg, Eds. Kluwer Academic/Plenum Publishers, New York, pp. 9-37.
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- Jurado-Chichay Z, Rowland SK, Walker GPL (1996). The formation of circular littoral cones from tube-fed pahoehoe: Mauna Loa, Hawaii. *Bull. Volcanol.* **57**:471-482.
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- Rowland SK, Walker GPL (1987). Toothpaste lava: characteristics and origin of a lava structural type transitional between pahoehoe and a'a. *Bull. Volc.*, **49**:631-641.