







**KENNA HARMONY RUBIN**  
(formerly Kenneth Howard Rubin)  
CURRICULUM VITAE  
*updated Jun 2023*

<b>SYNOPSIS</b>	• Catalytic Thought Leader in Geochemistry, Deep Sea Research, Environmental Sciences, & Informatics; • Highly Effective University Department and Scientific Community Leader; • Globally recognized Science Communicator
<b>ADDRESS</b>	Graduate School of Oceanography, University of Rhode Island, Narragansett Bay Campus, 215 South Ferry Road, Narragansett, RI 02882. 808-218-2801 (cell) email: Kenneth.rubin@uri.edu  <a href="https://www.linkedin.com/in/kenna-rubin-489a6622/">https://www.linkedin.com/in/kenna-rubin-489a6622/</a>  <a href="https://orcid.org/0000-0002-8554-1337">https://orcid.org/0000-0002-8554-1337</a>  <a href="http://www.researchgate.net/profile/Ken_Rubin">www.researchgate.net/profile/Ken_Rubin</a> Professional social media:  <a href="https://twitter.com/kenhrubin">kenhrubin</a>  <a href="https://www.instagram.com/kenhrubingeo/">kenhrubingeo/</a>  <a href="https://www.youtube.com/@kenrubin">@kenrubin</a>
<b>BIOGRAPHICAL DATA</b>	Current Position: Associate Dean of GSO Research Citizenship: United States of America Born: Sherman Oaks, California Home address: 26 Cocumcussoc Way, North Kingston, RI 02852
<b>EDUCATION</b>	<i>All post-secondary degrees from University of California, San Diego (UCSD)</i> B.A. Chemistry (Chemistry Department), June 1984 Undergrad. research topic: organo-metallic compounds of Mo (VI); Advisor: G. Schrauzer ( <i>retired</i> ) M.S. Oceanography (Scripps Institution of Oceanography), Dec. 1985 Research topic: O <sub>2</sub> and supersaturation in central N. Pacific surface waters; Advisor: H. Craig ( <i>deceased</i> ) Ph.D. Earth Sciences (Scripps Institution of Oceanography), March 1991 Dissertation: Timing, extent and sources of marine volcanism through U-series disequilibrium; Advisor: J. D. Macdougall ( <i>retired</i> )
<b>PRIOR PROFESSIONAL EXPERIENCE</b>	Earth Sciences Dept. (aka Geology & Geophysics), School of Ocean & Earth Science & Technology (SOEST), 1680 East West Rd, University of Hawaii, Honolulu, HI 96822 ( <i>except as noted</i> ) Jul. 2007-June 2023: Professor of Geochemistry and Volcanology Jul. 2014-Jun. 2018: Department Chair [25 faculty, 120+ students 10 staff] Jul. 2013-June-2014: Associate Dept. Chair Jul. 2006-Jul 2010: Chair, Volcanology, Geochemistry Petrology Division [10 faculty, 3 staff, 10-15 graduate students] Jul. 2001-Jun 2007: Associate Professor with tenure May 2003-2008: Member Oregon State Univ, College of Ocean and Atmospheric Science graduate faculty Jun. 2001-Jun 2007: Associate Professor Jan. 1995-Jun 2001: Assistant Professor Jan. 1999-present: Member, Global Environmental Science program (Oceanography Dept.) Faculty Jul. 1995-present: Member, UH Graduate Faculty Feb. 1994-Dec. 1994: Assistant Researcher Feb. 1992-Jan. 1994: SOEST Young Investigator Scripps Institution of Oceanography, Univ. Calif. San Diego Mar. 1991-Jan. 1992: Postdoctoral Researcher Sept. 1984-Mar. 1991: Research and Teaching Assistant Lawrence Livermore National Laboratory, Nuclear Chemistry Division Nov. 1988-Nov. 1990: Visiting Student Researcher (Gamma Spectrometry & ICP-MS Labs) Chemistry Dept., Univ. Calif. San Diego June 1983-June 1984: UC President's Undergraduate Research Fellowship Sept. 1982-Dec. 1984: Teaching Assistant

<b>LEADERSHIP AND COMMUNITY STEWARDSHIP</b>	<p><i>current</i></p> <ul style="list-style-type: none"> <li>• <u>Geochemical Society</u> Board member (since 2018)</li> <li>• <u>CrossRef</u> (international DOI agency) Rep for the Geochemical Society (since 2020)</li> </ul> <p><i>past</i></p> <ul style="list-style-type: none"> <li>• <u>U.H.M. Earth Sciences Academic Dept.</u> Chair (2014-2018), Associate Dept. Chair (2013-2014) and Graduate Program academic chair (2013-2018)</li> <li>• <u>Univ. Hawaii System</u> Radiation Safety Comm. Chair (2022-2023, member since 1995)</li> <li>• <u>Geological Society of America</u> GIDS (Geoinformatics &amp; Data Science) Div. chair/past chair (2019-2022)</li> <li>• <u>UHM Academic Program assessment coordinator</u> (2018-2022).</li> <li>• <u>Goldschmidt Conference</u> Local Organizing Committee Chair and Science Committee Member (2018-2020 and 2020-2022)</li> <li>• <u>SOEST Executive Leadership Committee</u> (2014-2018)</li> <li>• <u>SOEST Research Division</u> Head. Volcanology, Petrology, Geochemistry (2006-11)</li> <li>• <u>NSF EarthCube program</u>: Community Elected Governance Chair (2018-2020); Community Elected Science Committee Chair/Leadership Council member (2016-2017)</li> <li>• <u>NSF-EAR</u>: National Academies of Science CORES Committee presenter on US Cyberinfrastructure for Sciences (2019) - decadal planning for NSF EAR Division,</li> <li>• <u>NSF-Ridge2000</u>: executive committee member (2009-2011); steering comm. member (2008-2011) &amp; Chair, Integration and Synthesis Oversight Committee, East Pacific Rise study integrated area, (2007-2009)</li> <li>• <u>IEDA</u> (Integrated Earth Data Applications) User Committee Inaugural Member – oversight of NSF facility at Lamont-Doherty Earth Observatory (2011-2016)</li> <li>• <u>UH Facilitative Skills Training</u>, July 2015</li> <li>• <u>UH Search Advocate Training</u>, Feb 2020</li> </ul>
<b>OVERVIEW OF CURRENT RESEARCH and TEACHING TOPICS</b>	<p>Deep Sea &amp; Coastal Zone studies; geochemical, isotopic, &amp; radionuclide investigations of active volcanic, tectonic, environmental &amp; climatically driven processes &amp; rates:</p> <ul style="list-style-type: none"> <li>• Submarine volcanic eruptions and environmental impacts</li> <li>• Deglacial, Holocene and Pleistocene sea level change and impacts on coral reefs</li> <li>• volcanology/petrology/geochemistry of active and historical volcanic eruptions</li> <li>• metals/metalloid environmental chemistry, including depleted Uranium munitions</li> <li>• University level teaching: courses in Geo/Marine Chemistry, Environmental Chemistry, Quaternary Geochronology; Submarine Volcanology. Currently Developing new lower division Climate Change Course</li> </ul>
<b>SOME CAREER HIGHLIGHTS</b>	<ul style="list-style-type: none"> <li>• <u>Scientific Publications and impact</u> (<a href="#">LINK</a>): 63 11 in very high impact journals: Nature (8), Science (1), and Nature Geosciences (2). &gt; 3700 career citations; H index – 34; <a href="#">ResearchGate</a> 97.5<sup>th</sup> percentile globally</li> <li>• Grants: \$7.6M from 36 research projects, primarily from NSF, 26 as lead PI</li> <li>• University-level teaching for 30 years, 20+ graduate students advised.</li> </ul>
<b>AWARDS, HONORS AND RECOGNITION</b>	<ul style="list-style-type: none"> <li>• Geochemical Society Distinguished Service award, 2023</li> <li>• Fellow, Geological Society of America (2012)</li> <li>• Multiple Community-elected Leadership positions (GSA division, NSF EarthCube)</li> <li>• Keynote Speaker, 34<sup>th</sup>, 32<sup>nd</sup> and 31<sup>st</sup> International Geological Congresses (IGC), Brisbane, AU (2012), Florence, Italy (2004), Rio de Janeiro, Brazil (2000)</li> <li>• Keynote Speaker, Goldschmidt Conferences, Prague (2011) &amp; Sacramento (2014)</li> <li>• SOEST/University of Hawaii Young Investigator Award (1992)</li> </ul>
<b>SEAGOING EXPERIENCE</b>	<ul style="list-style-type: none"> <li>• <u>multidisciplinary expeditions</u>: 28 since 1985 (18 since 2010) on 6 UNOLS &amp; 3 other vessels.</li> <li>• <u>expeditions as chief scientist</u>: 5</li> <li>• <u>Human Occupied Vehicle Dives</u>: 24 over 11 expeditions</li> <li>• <u>Remotely Operated Vehicle Dives</u>: 103 over 10 expeditions +35 as remote participant</li> <li>• <u>Autonomous Underwater Vehicle Deployments</u>: 43 over 6 expeditions</li> <li>• <u>Towed Camera Systems</u>: 31 deployments over 4 expeditions</li> </ul>

**PROFESSIONAL CONSULTANT**

- Legal Consulting for volcanic hazards (2020-present)
- Scientific consultant to the US Army on environmental radioactivity (2007-2010)
- Pedagogy, content consultant on junior/senior high school texts for publishers HR.W., Scholastic, Capstone, professional texts for Blackwell and Elsevier

**UHM LABORATORIES**

Director, Director, SOEST Isotope Laboratory  
 Director, SOEST multi-collector plasma mass spectrometry laboratory

**PROFESSIONAL MEMBERSHIPS**

(since year or years active)

American Geophysical Union (1987); Geological Society of America (1992); Geochemical Society (1997); Hawaii Center for Volcanology (1992); American Association for the Advancement of Science (2004), International Assn of Volcanology & Chemistry of Earth's interior (2006); Sigma Xi (2020); American Chemical Society (1994-2005); Hawaiian Academy of Sciences (1997-2005)

**PUBLIC OUTREACH**

- National/International/Local Broadcast Media (volcano and environmental topics):
  - >50 on air interviews with CNN, BBC, PBS, NPR etc.
  - >50 interactions for print media articles (Nat. Geo, NYT, etc.)
- Highlighted interviewee UN Internat. Labor Org. "Dignity at Work" initiative (2022)
- COMPASS Science Communicators training, 2016
- High Impact Professional-only Social Media Twitter feed (>3K follower)
- Wired magazine Best Natural Disasters Experts on the Web, #2 on the list, 2015
- NSF distinguished lecturer, 2011 (for Ridge 2000 program) – public and university presentations about submarine volcanoes.
- EarthCube distinguished lecturer, 2016-2020
- Hawaii Diversity and Sustainability – Interdisciplinary Kahoolawe Island cultural initiative participant; frequent participant SOEST Summer Bridge & EPIK instructor
- Public Outreach/distance learning via the Internet (created and maintain award winning academic and scientific websites - 13 awards for excellence for ASK-AN-EARTH-SCIENTIST, Hawaii Center for Volcanology Web and SOEST websites.)

<b>CONTRACTS AND GRANTS - AWARDS RECEIVED</b> (through Apr. 2022)			<b>Summary - Dollar Amounts since '92</b>			
<b>Total with Rubin as Project Director (PD)</b>			<b>\$5,554,573</b>	<b>\$185K/yr</b>		
<b>Total with Rubin as Co-PI</b>			<b>\$2,683,367</b>			
<b>Overall Total</b>			<b>\$8,237,940</b>	<b>\$275K/yr</b>		
Projects List		Investigators	Agency/No.	Amount	start	end
<b>Rubin as Project Director – Extramural</b>						
1	RAPID: Tracking magmatic and volcanic changes in the May 2018 Kilauea Eruption	Rubin, Garcia, Hammer, Shea	NSF-EAR 1838502	\$119,821	Jun-18	May-20
2	Volcanic Fire in the Tongan Sea: a multidisciplinary study of submarine volcanoes, hydrothermal activity and benthic ecology in Earth's highest density, recently active, volcanic province	Rubin, W. Chadwick, D. Butterfield, J. Resing	SOI-FK171117	\$990,000	Aug-18	Aug-18
3	Ice Age Coral Reefs of the Central Pacific and their Records of Dramatic Sea Level Change	Rubin, Fletcher, White	SOI-FK08517	\$909,000	Nov-19	Nov-19
4	RAPID - High precision radiometric dating of Axial Seamount 2015 eruption products with 210Po-210Pb	<b>Rubin</b>	NSF-OCE 1602194	\$49,841	11/15	10/17 (1 yr NCE)
5	Temporal/spatial scales of mantle wedge composition and processes investigated with young boninites and basalts from the unusually active NE Lau Basin	<b>Rubin</b> , Hellebrand, Konter	NSF-OCE 1538121	\$275379	8/15	7/20
6	CIF21 DIBBs: Collaborative Research: Cyberinfrastructure for Interpreting and Archiving U-series Geochronologic Data	<b>Rubin</b>	Charleston Coll. - NSF-ACD subaward	\$75736	9/14	8/19 (2 yr NCE)
7	SOEST Isotope Laboratory Solicitation Response for the NOAA Statement of Work/Specification for the Radiological Analysis of 226Ra and 210Pb in Fish Otoliths (plus 2 <sup>nd</sup> and 3 <sup>rd</sup> year renewals)	<b>Rubin</b> , Pyle	NOAA JB133F10SE3679 & WE133F11SE1945 & 3 <sup>rd</sup> yr (direct payment thru JIMAR)	\$93000	09/10	09/13
8	RREADI3- TCS Eruption dating readiness and decadal magmatic timing studies for the EPR ISS	<b>Rubin</b>	NSF-OCE 0937409	\$124653	09/09	08/14
9	Effect of Melt Supply on MORB Compositions at Local and Regional Scales	<b>Rubin</b> Sinton	NSF-OCE 0933884	\$356,191	09/09	08/13

<b>Grant Awards Received -- Continued</b>						
10	Technician Support for a new multi-collector ICP-MS facility for Terrestrial and Marine Geochemical Research	Rubin, Ravizza, Mahoney	NSF-EAR 0841797	\$60000	04/09	03/11
11	Collaborative Research: Rapid Response to a Submarine Eruption at W. Mata Volcano	Rubin, Cowen	NSF-OCE 0929881	\$95484	04/09	03/11
12	Rates, Sources and Magmagenesis of Alkalic Lavas at the Edge of an Intraplate Hotspot: A Multi-tracer Study of the Youngest Volcanics on Oahu, Hawaii	Rubin, Pyle	NSF-EAR 0838271	\$297682	01/09	12/13
13	Sources of Radiation in the Hawaiian Islands with Emphasis on Naturally Occurring and DU Uranium Isotopes	Rubin	US Army (NDCEE-071000340)	\$16700	08/07	05/09
14	SGER: Detailed Lava Surface Age Map and Pre-eruptive Magma Aging for the 2005-6 Volcanic Eruption at 9° 46'-9° 56'N EPR	Rubin	NSF-OCE 0732761	\$88002	07/07	05/09
15	SGER: High Resolution Lava Surface Dating and Mapping for a 2005-6 volcanic event in the 8-11 N EPR ISS	Rubin	NSF-OCE 0636439	\$37516	07/06	12/07
16	Acquisition of a multi-collector ICP-MS for Marine and Terrestrial Geochemical Research	Rubin, Ravizza, Mahoney, Pyle, DeCarlo	NSF-EAR 0549618 (OCE share)	\$700000	03/06	02/10
17	SGER: a novel approach to evaluate hydrothermal fluid interaction with injected magma dykes at mid-ocean ridges using radium isotopes	Rubin	U. Miami - NSF-OCE subaward	\$12000	1/06	12/07
18	Collab. Research: A Uranium-Series and Hafnium Isotope Investigation of the Link Between Partial Melting and Mantle Heterogeneity Beneath the Southeast Indian Ridge.	Rubin	NSF-OCE 0221069	\$186607	10/02	9/07
19	The Timing and Nature of Volcanological Processes as Captured by Bimodal Composition Eruptions	Rubin	NSF-EAR 0106463	\$207501	7/01	6/04
20	Recent Ridge Eruptive Activity Dating and Investigations: lava geochronology and mantle melting - "RREADI-2" Project	Rubin	NSF-OCE 9905463	\$246530	9/99	9/04
21	Recent Ridge Eruptive Activity Dating and Investigations (the "RREADI" Project)	Rubin	NSF-OCE 9633268	\$95610	12/96	11/98
23	U-Th-Ra isotope systematics of the historical lavas of Kilauea volcano, Hawaii	Rubin, Garcia	NSF-EAR 9628288	\$135000	6/96	5/98
24	Developing an internal isochron U- and Th-series disequilibrium technique for dating MORB and other submarine lavas with TIMS.	Rubin, Mahoney, Spencer	NSF-OCE 9413315	\$46674	9/94	8/95
25	Acquisition of a high abundance sensitivity thermal ionization mass spectrometer	Rubin, Mahoney, Sinton, Batiza, Garcia	NSF-OCE 9314503	\$155713	2/94	1/95
26	Acquisition of a high abundance sensitivity thermal ionization mass spectrometer. (different proposal from above)	Rubin, Mahoney, Garcia, Self, Sinton	NSF-EAR 9302846	\$155713	12/93	11/95
<b>Rubin as PD- Intramural (University Research Council Seed Money Program)</b>						
1	A Novel Approach to Age Determinations of Geologically Recent (<100,000 Years Old) Volcanic Eruption Deposits Using Th-U Isotopes in Associated Fossils	Rubin	UH-URC	\$11000	5/01	5/02
2	Th-U dating of Hawaiian corals by thermal ionization mass spectrometry and the local record of sea level fluctuations over the past 150,000 yrs.	Rubin	UH-URC	\$13220	1/94	12/94
<b>Rubin as Co-PI - Extramural (Project Director listed first under "Investigators")</b>						

1	MRI: Acquisition of a Thermal Ionization Mass Spectrometer (TIMS) for Multi-disciplinary Research and Student Training at UH	Konter, Rubin, Pietruszka	NSF-EAR 2018807	\$624,649	Aug-20	Jul-22
2	Collab. Research: Volcanic Eruptions on the Galapagos Spreading Center: Effect of Variable Magma Supply on Eruption and Magma Chamber Processes on Mid-Ocean Ridges	Sinton, <b>Rubin</b>	NSF-OCE 0849813	\$449,168	9/09	8/13
3	Collab. Research: Integrated Petrological, Geophysical & Numerical Modeling Constraints on Crustal & Mantle Processes along the GSC	Sinton, <b>Rubin</b> , Mahoney, Ito	NSF-OCE 0327051	\$316877	01/04	12/07
4	Volcanic Eruptions on Mid-Ocean Ridges: Insights into Axial Magma Chamber Processes	Sinton, <b>Rubin</b>	NSF-OCE 0241578	\$198205	8/03	7/06
<b>Grant Awards Received -- Continued</b>						
5	Acquisition of a high resolution, sector field, ICP-MS and laser ablation system	Ravizza <b>Rubin</b> , DeCarlo, Mahoney, Garcia	NSF-EAR 0215297	\$313040	9/02	8/04
6	Field demonstration of Icelandic Rift Zones for U.S. Mid-ocean ridge researchers	Sinton, <b>Rubin</b>	NSF-INT 9910570	\$30800	9/99	8/00
7	Volcanological Investigations of a Superfast-Spreading Mid-Ocean Ridge	Sinton, <b>Rubin</b> , Batiza	NSF-OCE 9633398	\$472701	9/98	8/04
8	Fine-scale magmatic processes at superfast spreading: EPR 17°-19°S.	Sinton, <b>Rubin</b> , Batiza	NSF-OCE 9415989	\$102452	11/95	10/97
9	Acquisition of ICP-MS for Research in Ocean and Earth Sciences	Batiza, <b>Rubin</b> , Measures DeCarlo, West	NSF-OCE and -EAR 9401738 and 9401770	\$100475 and \$75000	12/94 and 12/94	11/95 and 11/96

## PUBLICATIONS

**Peer-reviewed Articles** (78 total; most recent first) – note: all published before name change in 2023

- Barone, B., Letelier, R. M., **Rubin, K. H.**, & Karl, D. M. (2022). Satellite detection of a massive phytoplankton bloom following the 2022 submarine eruption of the Hunga Tonga-Hunga Ha'apai volcano. *Geophysical Research Letters*, 49, e2022GL099293. <https://doi.org/10.1029/2022GL099293>. (see also April preprint DOI: 10.1002/essoar.10511402.1)
- Mitchell, S., Hudak, M. Bindeman, I. Carey, R. McIntosh, I. Houghton, B, **Rubin, K.** (2022) Isotopic signatures of 1 magmatic fluids and seawater within silicic submarine volcanic deposits, *Geochimica et Cosmochimica Acta*, in press, March 2022, doi: <https://doi.org/10.1016/j.gca.2022.03.022>
- Falkenberg, J. J., Keith, M., Haase, K. M., Sporer, C., Bach, W., Klemd, R., Harald Strauss, H., Storch, B., Peters, C., **Rubin, K.H.**, Anderson, M.O. (2022) Spatial variations in magmatic volatile influx and fluid boiling in submarine hydrothermal systems: Insights from sulfide chemistry at Niuatahi caldera, Tonga rear-arc, *Geochem. Geophys. Geosys.*, 23 (4), e2021GC010259, <https://doi.org/10.1029/2021GC010259>.
- Haase, K.M., M.V. Schoenhofen, B. Storch, C. Beier, M. Regelous, **K. Rubin**, P.A. Brandl (2022) Effects of the hydrous domain in the mantle wedge on magma formation and mixing at the Northeast Lau Spreading Centre, SW Pacific, *Geochem. Geophys. Geosys.*, 23, e2021GC010066. <https://doi.org/10.1029/2021GC010066>
- Arran P. Murch, Ryan A. Portner, **Ken H. Rubin**, David A. Clague (2022) Deep-subaqueous implosive volcanism at West Mata seamount, Tonga, *Earth Planet. Sci. Lett.*, 578, #117328, DOI: 10.1016/j.epsl.2021.117328
- Anderson MO, Norris-Julseth C, **Rubin KH**, Haase K, Hannington MD, Baxter AT and Stewart MS (2021) Geologic and Structural Evolution of the NE Lau Basin, Tonga: Morphotectonic Analysis and Classification of Structures Using Shallow Seismicity. *Front. Earth Sci.* 9:665185. doi: 10.3389/feart.2021.665185. 1.
- Falkenberg, Jan, Keith, Manuel, Haase, Karsten M, Bach, Wolfgang, Klemd, Reiner, Strauss, Harald, Yeo, Isobel A, **Rubin, Kenneth H**, Anderson, Melissa O (2021) Effects of fluid boiling on Au and volatile element enrichment in submarine arc-related hydrothermal systems, Niu South, Tonga arc, *Geochimica et Cosmochimica Acta* 307 (2021) 105–132. Doi: 10.1016/j.gca.2021.05.047
- Rubin, K.H.**, Daniels, M., Fulker, D, Brown, J., Richard, S., Meier, O., Zaslavsky, .I, Willis, C., McHenry, K., Kirkpatrick, C. (2020). Recommended Standards and Specifications for EarthCube Projects. *EarthCube*

- Leadership Council (May 7, 2020). In EarthCube Organization Materials. UC San Diego Library Digital Collections. pp4, <https://doi.org/10.6075/J0QR4VMG>
- Rubin, K.H.** et al (as "EarthCube Leadership Council") (2020). EarthCube Charter, 2020 version. In EarthCube Organization Materials. UC San Diego Library Digital Collections. <https://doi.org/10.6075/J0C53JDQ>
- Chadwick, W.W, **Rubin, K.H.**, Merle, S.G., Bobbitt, A.M., Kwasnitschka, T., Embley, R.W. (2019) Recent Eruptions Between 2012 and 2018 Discovered at West Mata Submarine Volcano (NE Lau Basin, SW Pacific) and Characterized by New Ship, AUV, and ROV Data *Frontiers in Marine Science* 6, article 495, pp25. DOI: 10.3389/fmars.2019.00495
- Rubin, K.H.**, Kelbert, A., Stamps, D. S., Meier, O., & Koskela, R. (2019). EarthCube Promotes FAIR Data and Data Resources for the Geosciences Community. In EarthCube at OpenSky UCAR, pp 7 , doi:10.5065/ggpb-m642
- Rubin, K.H.**, Meier, O., Schreiber, L., & Stamps, D.S. (2019). FAIR Data Resources. In EarthCube at OpenSky UCAR, pp 4 doi:10.5065/3qhr-z449
- Graham, David W., Michael, Peter J., **Rubin, Ken H.** (2018) An investigation of mid-ocean ridge degassing using He, CO<sub>2</sub>, and  $\delta^{13}\text{C}$  variations during the 2005-06 eruption at 9°50'N on the East Pacific Rise, *Earth Planet. Sci. Letters*, 504, 84-93. DOI: 10.1016/j.epsl.2018.09.040.
- Clague, David, Paduan, Jennifer, Dreyer, Brian, Chadwick, William. **Rubin, Kenneth**, Perfit, Michael, Fundis, Allison (2018) Chemical Variations in the 1998, 2011, and 2015 Lava Flows from Axial Seamount, Juan de Fuca Ridge: Cooling During Ascent, Lateral Transport, and Flow, *Geochem. Geophys. Geosys.* 19 (9), 2915-2933, doi.org/10.1029/2018GC007708.
- Embley, Robert W.. **Rubin, Kenneth H.**, Extensive young silicic volcanism produces large deep submarine lava flows in the NE Lau Basin, *Bulletin of Volcanology* (2018) 80:36, pp23 <https://doi.org/10.1007/s00445-018-1211-7>. <http://rdcu.be/JffP>
- Rubin, K. H.**, Daniels, M., Meier, O., Stamps, D.S., and EarthCube Leadership Council (2018). EarthCube Leadership Council Recommendations for a Science-Driven Workbench. In EarthCube at OpenSky UCAR. pp2, <https://doi.org/10.5065/3xqc-ct87>
- Butler, Rhett, Burney, David A., **Rubin, Kenneth H.**, and David Walsh (2017) The Orphan Sanriku Tsunami of 1586: New Evidence from Coral Dating on Kaua'i, *Natural Hazards*, **88**, 797–819, DOI: 10.1007/s11069-017-2902-7.
- Dutton, A., Rubin, K.H., McLean, N, Bowring, Bard, J. E., Edwards, R.L., Henderson, G.M., Reid, M.R., Richards, D.A., Sims, K.W.W., Walker, J.D., Yokoyama Y. (2017) Data reporting standards for publication of U-series data for geochronology and timescale assessment in the earth sciences, *Quaternary Geochronology* **39**, 42-149, DOI: 10.1016/j.quageo.2017.03.001
- Shorttle, Oliver, Rudge, John F, Maclennan, John, Rubin, Ken H (2016) A Statistical description of concurrent mixing and crystallisation during MORB differentiation: Implications for trace element enrichment, *J. Petrology*, **57** (11-12): 2127-2162. doi: 10.1093/petrology/egw056
- Colman, Alice, Sinton, John, **Rubin, Ken** (2016) Magmatic Processes at Variable Magma Supply Along the Galápagos Spreading Center: Constraints from Individual Eruptive Units, *Journal of Petrology*, **57(5)**, 981-1018, doi: 10.1093/petrology/egw032.
- Zellmer, GF, **K. H. Rubin**, CA Miller, JG Shellnutt, A Belousov, M Belousova (2015) Resolving discordant U-Th-Ra ages: constraints on petrogenetic processes of recent effusive eruptions at Tatun Volcano Group, northern Taiwan, In: Caricchi, L. & Blundy, J. D. (eds) *Chemical, Physical and Temporal Evolution of Magmatic Systems*. Geological Society, London, Special Publications, 422, DOI: 10.1144/SP422.3
- Lupton, John, **Rubin, Ken H.**, Arculus, Richard, Lilley, Marvin, Butterfield, David, Resing, Joseph, Baker, Edward, Embley R., 2015. Helium Isotope, C/3He, and Ba-Nb-Ti Signatures in the Northern Lau Basin: Distinguishing Arc, Back-arc, and Hotspot Affinities, *Geochem. Geophys. Geosys.*, **16**, 1133–1155, DOI: 10.1002/2014GC005625.
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### **Books**

- M Allaby, R Coenraads, S Hutchinson, K McGhee, J O'Byrne, **K Rubin** (alphabetical), Encyclopedia of Earth; The University of California Press (2008). pp608 (*this book is targeted as “general reference”*)
- KH Rubin** (2007) Volcanoes and Earthquakes, Insiders Series, The Five Mile Press PTY, Ltd, Sydney Australia, pp64 (*this book is targeted to Middle Schoolers*)

### **Web documents authored**

Approx. 400 since 1994 for Ask-an-Earth-Scientist ([www.soest.hawaii.edu/GG/ASK](http://www.soest.hawaii.edu/GG/ASK)); Hawaii Center for Volcanology ([www.soest.hawaii.edu/GG/HCV](http://www.soest.hawaii.edu/GG/HCV)); U. Hawaii GG Dept., and SOEST  
New UHM Earth Sciences Website release (ver 6), 2020 – major site redesign

**Conference Abstracts** (172 since 1987), including >20 invited speakerships or keynote addresses

**H-INDEX:** 34 by google scholar and ResearchGate

**ISI CITATION INDEX 32<sup>1</sup>:** I stopped updating or tracking in 2015

¶ Note: ISI routinely confuses me and another Kenneth H Rubin in behavioral sciences, under-reporting my citation activity in Web Of Science unless I manually transfer papers to my profile, which I stopped doing in 2015

<b>FIELD EXCURSIONS</b>
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*Studies at sea: 31 expeditions [my role in brackets]:*

- AT50-02 Jul-Aug 2022, HOV ALVIN dives (the first with the vehicle’s new 6500m depth capability), Puerto Rico Trench and Mid-Cayman Spreading Center [*Geology Team Lead*]
- KM2106, May-June 2021, ROV Luukai dives, geological investigation of the Kaiwi shelf volcanism and coral reefs (between Oahu and Molokai), R/V Kilo Moana [*scientist*]
- SO 263, June 2018 Quest 4000 ROV dives, Lau Basin (Bremen Quest vehicle) geological/hydrothermal/biological observations, water column chemistry and mapping on R/V Sonne [*scientist*]
- Schmidt Ocean Institute “Underwater Fire”, FK171110, Nov-Dec., 2017. Submersible diving with ROV SuBastian mapping of submarine volcanoes in Tonga. [*chief scientist*]
- Schmidt Ocean Institute “Underwater Fire”, FK171110, Nov, 2017. AUV Sentry ultra-high resolution mapping of submarine volcanoes in Tonga. [*chief scientist*]

- Schmidt Ocean Institute “Sea Level Secrets”, FK170825, Aug-Sept., 2017. Submersible diving with ROV SuBastian mapping of drowned ice age coral reef deposits in Hawaii and the Line Islands for sea level change research. [*chief scientist*]
- Schmidt Ocean Institute “Sea Level Secrets”, FK170825, Aug., 2017. AUV Abyss ultra-high resolution mapping of drowned ice age coral reef deposits in Hawaii for sea level change research. [*chief scientist*]
- MBARI 2015, ROV Doc Ricketts expedition on the R/V Western Flyer to Axial Volcano to study recent volcanic deposits [*scientist*].
- HURL 2014 field season, 5 Submersible Dives with Pisces V, R/V KOK, Nov. 2014, exploring shoreline feature at 700m depth off Makapuu, Oahu and Last glacial maximum coral reefs at Penguin Banks, Hawaii [*chief scientist*]
- MBARI 2014, ROV Doc Ricketts expedition on the R/V Western Flyer to Axial Volcano to study recent volcanic deposits [*scientist*].
- R/V Kilo Moana, 2014– New ROV Lu’ukai field trials – first science dives, Hawaii, Jan 2014 [*scientist*]
- MBARI 2013, ROV Doc Ricketts expedition on the R/V Western Flyer to Axial Volcano to study recent volcanic deposits [*scientist*].
- HURL 2013 field season, 2 Submersible Dives with Pisces V HOV and towed LRT system – Aug 2013, exploration and sampling of last glacial maximum and deglacial coral reefs at Koko Head, Oahu [*chief scientist*]
- HURL 2012 field season, 1 Submersible Dive with Pisces V, R/V KOK – Dec 2012, exploration and sampling of potential 1400m deep paleo shoreline off of Barber’s Point, Oahu [*scientist*]
- NE Lau 2012, NE Lau basin, ROV geological/hydrothermal/biological observations, water column chemistry and mapping expedition on R/V Revelle, Sept 2012 [*scientist, leading volcanic rock sampling operations*]
- NE Lau 2011, NE Lau basin, AUV, camera sled, dredging expedition on R/V Kilo Moana, Nov 2011 [*scientist leading dredge operations*]
- NE Lau 2010-2, NE Lau basin dredging expedition on R/V Kilo Moana, Dec 2010 [Chief Scientist]
- HURL 2010 field season, 2 submersible dives and ROV operations exploring last glacial maximum coral reefs at Penguin Banks, Hawaii, Oct 2010 [*Chief Scientist*]
- NE Lau 2010. NE Lau basin multi-disciplinary volcanologica/oceanographic expedition on R/V Kilo Moana, May 2010 [*co-lead investigator for camera sled operations*]
- GRUVEE 2010, Galapagos Spreading Center expedition, Alvin submersible diving from R/V Atlantis, March-April 2010. [*CoPI*]
- NELRC 2009, NE Lau Eruption Response Cruise, on R/V Thompson – April-May 2009 multi-disciplinary rapid response ROV exploration and sampling of active volcanic sites in the NE Lau Basin. Chief Sci: Joe Resing (NOAA), [*Project co-PI, shipboard lead for petrology/volcanology*]
- HURL 2006 field season, 3 Submersible Dives with Pisces V, R/V KOK - Sept 2006, exploration and sampling of potential LGM shorelines in Hawaii, Chief Sci: Chip Fletcher [*CoPI*]
- RESET06 rapid response cruise to EPR ISS eruption site R/V Atlantis - Jun-Jul 2006, Submersible Dives with the ALVIN submersible, night camera sled program, Chief Sci: Karen Von Damm [*CoPI*]
- HURL 2004 field season, 1 Submersible Dives with Pisces V, R/V KOK - Sept 2004, exploration and sampling of potential LGM shorelines in Hawaii, Chief Sci: Chip Fletcher [*CoPI*]
- STOWA Expedition, R/V Atlantis - JAn-Mar 1999 lava flow mapping, sampling with the ALVIN submersible, associated night sampling programs, and DSL120 (16°-19°S EPR). [*CoPI*]
- HURL 1998 field season Submersible Dives with Pisces V, R/V KOK - Sept 1998 - exploration, sampling southwest rift zone of Mauna Loa. [*CoPI*]
- Gloria Leg 8, R/V Melville - "MOAI expedition" (UH), May-July, 1993 - rock dredging, East Pacific Rise off-axis seamounts, 16°-19°S (Chief Scientists: J. Sinton & R. Batiza) [*scientist*].
- Roundabout expedition Legs 14 & 15, R/V Thomas Washington (SIO) Jan-Mar 1989 (Chief Scientist: J.Hawkins) seismic reflection, SeaBeam mapping, dredging in Lau Backarc Basin. [*scientist*]
- Alcione expedition, R/V Melville (SIO) Aug, 1985 (Chief Scientist: H. Craig) - Water column geochemistry of NW Pacific, geology, outer Hawaiian Islands [*scientist*]

*Studies on land:*

- Volcanological/geochemical/lava sampling field studies: Eastern Volcanic Zone, Iceland (Aug 2008), Krafla and Askja volcanoes, Iceland (July-Sep 2002), Koko Rift Zone, Oahu, Hawaii (2001 to 2002), Torfajokul volcano, Iceland, Fall, 2001, Paricutin & El Jorullo volcano, Michoacan, Mexico (2001)

- Icelandic Rift Zones Field demonstration for US Mid-ocean ridge researchers, (1999)
- Field studies of fossiliferous conglomerates on Lana'i, Hawai'i (multiple trips 1994-2001).
- Monitoring/Sampling active eruption of Kilauea volcano, with M. Garcia, 1992 - May 1998.
- Mapping/Sampling of post-erosional dikes with M. Garcia, Island of Kauai, April 1993
- Mapping/Sampling of lava flows and dikes with H. West, Mauna Lei Valley, Lana'i, August 1992.

### **OTHER RESEARCH EXPERTISE**

ANALYTICAL: 1) Thermal Ionization and Inductively-Coupled Plasma mass spectrometry; 2) Nuclear geochemistry/spectrometry; 3) mineralogic separations by density and magnetic methods; 3) Application of analytical inorganic chemistry to geological problems and trace analysis procedures.

RADIO-ISOTOPE EXPERIENCE: 1) 25 yrs experience working with transuranics and daughters for tracer studies and assays, including natural  $^{238}\text{U}$ ,  $^{235}\text{U}$  and  $^{232}\text{Th}$  chain nuclides, and synthetic or enriched Th, U, Ra, Np, Pa, Pb and Po isotopes; 2) handling solid, aqueous and gaseous ( $^{222}\text{Rn}$ ) forms; 3) analysis by alpha, gamma and mass spectrometry, liquid and gas scintillation; 4) Radioactive materials training at UCSD, Lawrence Livermore National Laboratory, and UH; 5) member UH Radiation Safety Committee since 2000.

COMPUTER EXPERTISE: Supervisor of multi platform department computer rooms for 5 years (Wintel, Linux, SunOS, Mac).; html and cgi scripting; Webmaster, site maintenance, site security; common aps power user, PC/MAC hardware maintenance.

### **Science Communications**

- Frequent High Profile Interviewee on Prominent National/International Broadcast Media (e.g., CNN, BBC) for Volcano, earthquake, and Environmental Topics, including more than 75 interviews in the 5 year period, of which roughly 50 and 15 were associated with 2018 and 2022 eruptions at Kilauea and Mauna Loa, respectively
- CONVERSE (Community Network for Volcanic Eruption Response), interagency volcanic crisis simulation invited participant, Nov. 2020
- COMPASS Science Communicators training, 2016
- Public access field science research live streams on YouTube and Facebook live for NOAA Ocean Exploration, NSF and Schmidt Ocean Institute (>400 hours since 2008)
- Spearheaded UHM Geology and Geophysics Department promotional video in 2014
- Developed and managed multiple high profile websites since 1994. Two large general-audience websites (~300 pages), both received ~1 Million page views per year since the late 1990s (Hawaii Center for Volcanology and Ask-an-Earth-Scientist)
- Prepared general-audience documents for US Army distribution in Hawaii explaining the causes and consequences of depleted Uranium munitions contamination in the Islands. 2008
- Frequent Hawaii State science fair judge
- Frequent interviewee on volcanology, sea level and other general science subjects for a variety of local, national and international media outlets (for instance, the 2018 Kilauea volcano Leilani Estates eruption crisis)-details upon request

**TEACHING – 58 courses as Primary or Major Instructor**

**Courses at UH** (descriptions follow table):

<b>Semester/ Year</b>	<b>Number</b>	<b>Course Title</b>	<b>Credit Hrs</b>	<b>Students</b>
Fall 2022	ERTH325	Geochemistry	3	12
	ERTH607	Submarine Volcanoes	3	5
Spring 2022	ERTH425	Environmental Geochemistry	3	12
Fall 2021	ERTH608	Isotopes and Trace Elements	3	4
Spring 2021	ERTH425	Environmental Geochemistry	3	4
	ERTH625	Advanced Environmental Geochemistry	3	4
Fall 2020	ERTH607	Submarine Volcanoes	3	3
	ERTH654	Contaminant Hydrology	3	13
Spring 2020	GG425	Environmental Geochemistry	3	6
	GG625	Advanced Environmental Geochemistry	3	3
Fall 2019		<i>sabbatical</i>		
Spring 2019	GG425	Environmental Geochemistry	3	8
	GG625	Advanced Environmental Geochemistry	3	5
Fall 2018	GG607	Submarine Volcanoes	3	10
Spring 2018	GG425	Environmental Geochemistry	3	9
	GG625	Advanced Environmental Geochemistry	3	1
Spring 2018	GG625	Adv. Environmental Geochemistry	3	1
Fall 2017	GG614	Advanced Field Study	var	2
Spring 2017	GG425	Environmental Geochemistry	3	5
Spring 2017	GG625	Adv. Environmental Geochemistry	3	1
Fall 2016	GG607	Submarine Volcanoes	3	3
Spring 2016	GG425	Environmental Geochemistry	3	7
Fall 2015		<i>Dept. chair/teaching release</i>		
Spring 2015	GG425	Environmental Geochemistry	3	15
Fall 2014		<i>Dept. chair/teaching release</i>		
Spring 2014		<i>Dept. chair/teaching release</i>		
Fall 2013	GG325	Geochemistry	3	5
Spring 2013	GG425	Environmental Geochemistry	3	2
Fall 2012	GG325	Geochemistry	3	10
Spring 2012	GG425	Environmental Geochemistry	3	6
Spring 2012	GG612	Accelerated Intro to Geology II (3 weeks of team taught course)	3*	3
Spring 2012	GG399	Geochemistry (as independent reading)	3	1
Fall 2011	GG711	Special Topics in G&G: Deep Submarine Eruptions	3	5
Fall 2011	GG399	Directed Reading – Global biogeochemistry of climate and oceans	3	1
Spring 2011	Off	Sabbatical- in the UK		
Fall 2010	Off	Sabbatical - at sea for part of semester		
Spring 2010	Off	at sea March through May		
Fall 2009	GG325	Geochemistry	3	7
Spring 2009	GG499	Senior Research - WI	4	1
Fall 2008	Off	off		
Spring 2008	GG425	Environmental Geochemistry	3	6
Fall 2007	GG325	Fundamentals of Geochemistry	3	5
Spring 2007	GG711	Special Topics in G&G: Deep Submarine Eruptions	3	6
Fall 2006	GG425	Environmental Geochemistry	3	6
Fall 2005	GG399	Fundamentals of Geochemistry –directed reading	3	1
Spring 2005	Off	off		
Fall 2004	GG425	Environmental Geochemistry	3	7
Spring 2004	GG325	Fundamentals of Geochemistry	3	9
Fall 2003	(GG425)	sabbatical	3 ***	6
Spring 2003	GG325	Fundamentals of Geochemistry	3	15
Fall 2002	GG425	Environmental Geochemistry	3	4

Spring 2002	GG325	Fundamentals of Geochemistry	3	6
Fall 2001	GG425	Environmental Geochemistry	3	7
Spring 2001	GG325 - WI	Fundamentals of Geochemistry	3	10
Fall 2000	GG425	Environmental Geochemistry	3	7
Spring 2000	GG325	Fundamentals of Geochemistry	3	7
Fall 1999†	(GG101)	Dynamic Earth	3 **	~75
Spring 1999	- at sea-			
Fall 1998	GG324	Low Temperature and Environmental Geochemistry	3	5
Spring 1998	GG711	Special Topics in G&G: Holocene and Quaternary Geochronology	3	
Fall 1997	GG324	Low Temperature and Environmental Geochemistry	3	7
Fall 1997	GG699	Directed Research	2	1
Spring 1997	GG735	Seminar in Geochemistry	2	1
Fall 1996	GG324	Low Temperature and Environmental Geochemistry	3	5
Spring 1996	GG612	Accelerated Intro to Geology II	3*	1
Spring 1996	GG425	Geochemistry	3	4
Spring 1996	GG399	Directed Reading	3	1
Fall 1995	GG710	Graduate Seminar: Dating Quaternary Events	2	9
Fall 1995	GG611	Accelerated Intro to Geology I	3*	3
Spring 1995	GG425	Geochemistry	3	6

Notes: (WI) writing intensive course

ERTH 654 is a collaboration by Dulai, El Kadi, and Rubin (33% each)

(\*) GG611 and 612 are team taught. In 2012 I taught 3 weeks. In 1995/96 I coordinated these courses and gave 20-25% of the lectures

(\*\*) My participation in GG101 was limited to 3 lectures. F. Duenneber was the lead instructor.

(\*\*\*) My participation in GG425 was limited to 4 lectures. G Ravizza was the lead instructor.

(†) Did not teach my own course this semester; department chair granted release time .

### Course Descriptions:

*Environmental Geochemistry:* Upper-division introduction to geochemical processes in the hydrosphere/atmosphere, biological cycles, stable and radiogenic isotope geochemistry, inorganic, organic, and radioactive contaminants in natural systems. Course number changed in 2000, with added emphasis on anthropogenic forcing of natural environments; course name changed in 2000

*Advanced Environmental Geochemistry:* Graduate version of 425

*Submarine Volcanoes:* Seminar course on submarine volcanism focused on current scientific literature, background literature, and group discussions.

*Geochemistry:* introduction to high and low temperature geochemistry, stable and radiogenic isotope geochemistry. Course number changed in 1996; name changed in 2009.

*Directed Reading:* U-series Disequilibrium (1 student)

*Accelerated Intro to Geology I and II:* Beginning Graduate-level course for entering students without traditional Geology background

*Graduate Seminar:* literature reading and discussion

*Seminar in Geochemistry:* Global Climate Change using Internet resources to gather/present data

### Course Evaluations

The Geology and Geophysics Department uses a standardized evaluation form. Student responses to questions 17 questions regarding Course and Instructor Quality are graded on an A-F scale. My Course evaluations on average (averaged first by course and then between courses) are a A-/B+.

## ADVISING

**SOEST FACULTY MENTOR Program**, since 2020

### GRADUATE STUDENT AND POSTDOCTORAL INTERACTIONS

#### A. Postdoctoral Scholar Training and Support (chronological order):

I brought each of the individuals listed below to UH just after graduation for postdoc positions. Number by year:

2008 (2)      2007 (2)      2005 (2)      2004 (4)      2003 (2)      2002 (2)  
 2001 (2)      2000 (1)      1999 (1)

### Details

1. Chris Russo: I supported 100% of Dr. Russo's salary from Jul 2007 through July 2008 and trained him in actinide isotope techniques. Dr. Russo is now employed in my group as a research technician
2. Rhea Workman: I acted as Dr. Workman main adviser during her stint as a SOEST young investigator and supervised her project on Galapagos Spreading Center basalts from Jan 2007 through Nov. 2008)
3. Georg Zellmer: 100% support of Dr. Zellmer's salary on a 1.5 year project to study time scales of magmatic processes in bimodal composition eruption products and silicic mid-ocean ridge basalts (Feb 2004 to June 2005)
4. Bill Chazey: co-support of Dr. Chazey's salary through a group proposal to Sinton/Ito/Mahoney and myself (April 2004 to May 2005). Roughly 70% of his 2.5 project is to do U-series work on Galapagos Spreading Center basalts under my supervision.
5. Zinzuni Jurado Chichay: 100% support of Dr. Chichay's salary on a 4 year project to study time scales of magmatic processes in bimodal composition eruption products (Fall 2001 to Fall 2005)
6. Iris van der Zander: 100% support of Dr. van der Zander's salary on a 2.5 yr project to develop new dating methods for mid-ocean ridge basalts (Mar 2002 to Dec 2004).
7. Mathew Smith: I supported 100% of Dr. Smith's salary from Aug 1999 through July 2001 and trained him in actinide isotope techniques.

### B. Graduate Student Advising, Supervision and Support (rev. chronological order)

1. Malia Zinn (Masters Supervisor, 2018-2020). Primary supervisor, 2 semesters salary support so far. Boninite petrogenesis.
2. Kate Herries (Masters Supervisor, 2016-2018). Primary supervisor, 2 semesters salary support so far. Boninite petrogenesis.
3. Sam Mitchell (Doctoral Comprehensive exam committee, 2016)
4. Val Finlayson (Doctoral Committee Member, 2014-2017)
5. Jeff Murl, MGeo Committee member (2015-2016).
6. Robert Benitez (MA Anthropology Committee member (2015-2016)).
7. Nicole Robinson (Masters Supervisor, Fall 2015 to Fall 2016). Committee member (Nicole returned to UHM after a hiatus to finish her degree in a year)
8. Sam Mitchell, (Comprehensive exam committee, Spring 2016)
9. Sarah Glancy (Masters Supervisor, Fall 2011 to 2015). Primary supervisor, 3 semesters salary support. Boninite petrogenesis
10. Jess Zeiss, (Masters Committee member, Spring 2012 to 2014).
11. Joe Fackrel (doctoral Comprehensive exam committee Member, Fall 2012-Mar. 2013) Advised/tested on chemical hydrology.
12. Alice Coleman (doctoral Committee Member, Fall 2010 to present) and Comprehensive exam committee chair, Spring 2012, Involved in the geochemistry aspects of Alice's doctoral research on GSC MORB petrogenesis
13. Jonathan Sleeper (doctoral Comprehensive exam committee Member, Fall 2011-Mar 2012) Advised/tested on submarine volcanology and geochemistry.
14. Janice Kunishige (doctoral comprehensive exam committee member, 2008-2010): I served as the external committee member for this UH Chemistry department students exam
15. William G. Cutler (doctoral committee member and comprehensive exam committee, Nov 2005 to 2011): I advised Bill in the environmental geochemistry of As and aqueous particulate phase interactions for his study of As contaminated agricultural soils in Hawaii.
16. Antje Hebrich: I advised and supported Ms. Hebrich's diplom research in my lab for and during Master's thesis write-up at Univ. Bremen (Jan-Dec 2008)
17. Chris Russo (Co-Advisor, 2003-2007): Chris is an OSU student who is doing a major portion of his doctoral research in my lab under my supervision. I have been a full committee member and co-advisor (as an OSU adjunct faculty member). Financial Support: some analytical and travel costs have been paid by an NSF grant for which I was the project director.

18. Marc McGowan (Masters Committee Member, 2002 to 2004): I served Marc's environmental geochemistry advisor on this hydrology/marine chemistry project until *graduation* in Fall 2004
19. Roberto Salzano (informal doctoral advisor, 2004): Univ. Roma graduate student who spent 2 months in my lab studying Pb isotopic sourcing of anthropogenic particles in urban Rome.
20. Eric Bergmanis (doctoral committee member, 1999-2009): I directed the geochronology/geochemistry aspects of Eric's doctoral research on MORB petrogenesis and advising him on general geochemistry (close to half of his doctoral research) Financial Support: research assistanceship from Jan 1999 to the present from two an NSF grants to John Sinton and me.
21. Buffy Cushman (doctoral qualifying exam committee, May 2001): I served as the geochemistry advisor for this exam. The student did not complete the PhD program.
22. Lester Sacks (Masters Advisor, 1997-1998): I advised Lester on a igneous isotope geochemistry project involving dating of young MORB. Lester took a leave of absence from graduate school early in 1998 for personal reasons and did not return. Financial Support: research assistanceship Fall 1997 through Spring 1998 semester from one of my NSF grants, after supporting him as a casual hire technician for 6 months prior to his entering graduate school.
23. Clark Sherman (doctoral committee member, PhD, 1995 to 2000): I directed the geochronology aspect of Clark's doctoral research on carbonate reef paleoecology, which was a major component of his research, until graduation in Spring of 2000.
24. Andrew Gascho (Interim Masters Advisor, 1997): I advised Andy for two semesters on academic issues and introduced him to the field of laboratory isotope geochemistry. He later worked with Dick Hey for his Masters project
25. Aaron Pietruszka (Co-Advisor, PhD, 1995-99): I directed the geochronology and geochemistry aspects of Aaron's PhD studies into Kilauea lava petrogenesis. Aaron successfully defended his doctoral thesis in Jan 1999. Financial Support: research assistanceship May 1996 to Nov1998 from one of my NSF grant
26. Jeff Witter (doctoral committee member and Qualifying exam committee 1995): I served as the geochemistry/geochronology advisor on this aborted doctoral project
27. Alan Soicher (Masters Committee Member, early 1990s): I served as the geochemistry advisor on this contaminant hydrology masters project
28. Bill Boger (Doctoral Committee Member and Qualifying exam committee early 1990s): I served as the geochemistry/geochronology advisor on this aborted doctoral project

## UNDERGRADUATE STUDENT INTERACTIONS

### A. Undergraduate (senior) Research Advisee (1):

Nancy Niklis (2008 to 2009) - Nancy did a senior research thesis project on As contamination in Hawaiian soils in my lab and wrote a senior thesis under my supervision.

**B. Undergraduate Student Advisees (6):** *Note: EARTH department changed its distributed advising system in 2001 to have only 2 Faculty Advisors.* David Olsen (1995); Elaine Lampitoc (1995 to Summer 2000); Lester Sacks - also, his senior thesis (1998); Alan Telio (1998); Heather Mullen (1995-1997); Thomas Vana (1999-2000)

### C. Undergraduate Student Lab Research Assistants supported (10):

Lester Sacks - (1996-1997: 1 year as a student helper and 1 semester as a full time casual hire technician after graduation and before he entered the GG dept. graduate program). Bobby Muse (1997), Melissa Ito (1998-1999), Celeste Hutchinson (Fall 1999), Junaid Dawul (Fall 2000 to Summer 2001), Yoshi Ikeda (Summer 2001 to Fall 2001), Jennifer Olson (summer 2001 to summer 2002), Ken Natividad (Summer 2001 to Spring 2005), Max Blake (summer 2002 to Fall 2004), Cherie Goto (summer 2002 Spring 2005); Nicole Okina (2009-2012)

### F. Other Student Supervision *department computer & projection infrastructure oversite and/or departent website dev/maintenance*

1. UH undergraduate Hubert Liang (2022 to present).
2. UH undergraduate and then grad student Chad Morita (2017 to 2022).
3. UH undergraduate Casey Teeters (2014 to 2017).
4. UH undergrad Bryce Nargareda (2011 to 2013).
5. UH undergrad Ryan Jesse (Sep to Dec 2011).
6. UH undergrad David Morse (2010- 2011).
7. UH undergrad Beau Mueller (Jan - Aug 2000).



8. I co-supervised the following GG Dept. Computer Room Student Supervisors: Zach Kent, Brian Smith and Winston Chow (over 1995-1999)

## **RECENT SERVICE OVERVIEW**

### **Scientific community**

- Division President, Geoinformatics and Data Science, Geological Society of America, 2019-2022
- Chair, NSF Earth Cube Leadership Council, 2018-2020
- Chair, NSF Earth Cube Science Committee, 2016-2018
- Associate Editor, G-cubed (since 2010)
- Director, Board of the Geochemical Society from 2018 to 2022
- Lead Organizer for two Goldschmidt international geochemical conferences (thousands of participants) in 2020 and 2022.
- Member, EarthCube Science Committee, 2014-present, Chair of 2 working groups and member of several others.
- Emcee, EarthCube All Hands Meeting May 2015, Arlington, VA, June 2016, Denver, CO
- Inaugural Member, User Committee, NSF Integrated Earth Data Applications facility at Lamont-Doherty Earth Observatory (2011 – 2016)
- Member, Ridge2000 steering committee (2008-2011) and Executive Comm. (2009 – 2011)
- Member, Time Critical Studies sub-com. of Ridge2000 steering committee (2005-2011)
- Member, AGU-VGP Section Executive Committee, 1996-1997
- Organizer, of three 100+ participant, NSF-sponsored workshops on interdisciplinary spreading center since (since 2008)
- Participant, in 8 other Marine and Terrestrial Geosciences workshops, Penrose conferences, Chapman conferences, etc., (since 1998)
- Frequent Session Chair/Convener at international symposia
- Proposal Review Panelist NSF 7 times since 2013, 14 times total (since 2000), NOAA 1 time (2010)
- Reviewing - Journal Article Reviews - >110 journal manuscripts, >150 research proposals (*in addition to those reviewed for panels*), 49 Book Chapters (4 technical, 40 Secondary School texts, 4 Primary School texts, 3 popular press science books for children)

### **University Service**

- Academic Department Chair, Univ. of Hawaii, Dept. of Earth Sciences (aka Dept. of Geology and Geophysics), 2014-2018
- Graduate Program Chair, Univ. of Hawaii, Dept. of Earth Sciences (aka Dept. of Geology and Geophysics), 2014-2018
- Associate Dept. Chair, same, 2013-2014
- Chair, UH System Radiation safety committee, 2022-present
- Member, UH System Radiation safety committee, 1995-present
- Long list of committee memberships, chairmanships at department and school level, including standing committees and search committees
- Spearheading of multiple special efforts (such as the Geology and Geophysics promotional video in 2014, the 10 year Strategic Plan in 2007, and Department/School websites (since 1994)
- Research Division Head Volcanology, Geochemistry, Petrology, Univ. of Hawaii for 2007-2010
- Department Website and Social media lead (primary content creator and site development), 1994 to present

### **Service to the General Community At-Large**

- Science Communicator: Frequent interviewee on my areas of research and on general science subjects (especially volcanology, oceanography, environmental science) for a variety media outlets, including major international and national organizations (e.g., CNN, BBC, NPR, DV, ABC Australia, etc..)
- Expert Consultant: Prepared general-audience documents for US Army distribution in Hawaii explaining the causes and consequences of depleted Uranium munitions contamination in the Islands.
- Two large general-audience websites authored (~300 pages), both receiving ~1 Million page views per year since the late 1990s (Hawaii Center for Volcanology and Ask-an-Earth-Scientist)