

CURRICULUM VITAE

Andrew C. Kurtz
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Education

Ph.D., Geological Sciences	Cornell University, Ithaca, NY	2000
M.S., Geological Sciences	Cornell University, Ithaca, NY	1996
B.S., Geology (<i>Summa Cum Laude</i>)	Ohio University, Athens, OH	1993

Research Interests

Low-temperature geochemistry: Silicate weathering processes and rates, soil development, relationship between weathering and watershed hydrology, relationship between chemical weathering and physical erosion.

Evolution of Earth's biogeochemical cycles: Modeling the carbon cycle on geologic timescales, relative importance of marine and terrestrial organic carbon burial, role of fire, coupling between biogeochemical cycles of carbon, sulfur, phosphorus, and silicon.

Isotope and trace element geochemistry: Development and application of novel tracers (Ge/Si, REEs, radiogenic and stable isotopes) to problems in weathering, soil development, and paleoceanography.

Employment

Associate Professor, Dept. of Earth and Environment, Boston University 7/12-present

Associate Professor, Dept. of Earth Sciences, Boston University 9/07-7/12

Assistant Professor, Dept. of Earth Sciences, Boston University 9/01-8/07

Post-Doctoral Associate, Penn State Astrobiology Research Center 10/99-8/01

Research: *Evolution of Earth's carbon, sulfur, and silica cycles*

Supervisors: Lee R. Kump, Michael A. Arthur

Ph.D. Student, Cornell University

Graduate Fellow, Biogeochemistry and Global Change 9/97-5/99

Research Assistant in Geological Sciences 9/95-9/97

Dissertation: *Germanium/Silicon and Trace Element Geochemistry of Silicate Weathering and Mineral Aerosol Deposition*

Advisor: Louis A. Derry

M.S. Student, Cornell University

Teaching Assistant in Geological Sciences; Geology, Oceanography 9/93-5/95

Thesis: *Geochemical Evolution and Uplift History of Miocene*

Plutons near the El Teniente Copper Mine, Chile

Advisor: Suzanne M. Kay

Honors and Awards

Outstanding Student Research Award, Geological Society of America 1998

Elected to *Phi Beta Kappa*, Ohio University 1993

Outstanding Undergraduate Student Award, Geology, Ohio University 1993

Dean's Scholarship, Ohio University 1992-1993

Professional Affiliations

Geological Society of America; American Geophysical Union; Geochemical Society

Teaching Experience (Boston University)

<u>Course Number and Title</u>	<u>Semester</u>	<u>Number of Students</u>	<u>Additional Information</u>
CC106 Origins (new BU Core Curriculum science course)	Spring 15	111	Developed and taught new course with faculty from Astro, Anthro, Bio depts. Additionally taught weekly discussion section. Served as course coordinator. Course coordinator
	Fall 16	137	
	Fall 17	75	
	Fall 18	94	
	Fall 21	107	
ES 105 Environmental Earth Sciences	Fall 02	75	Supervised 2 TFs
	Spring 04	139	Supervised 3 TFs
	Spring 05	104	Supervised 3 TFs
	Spring 06	172	Supervised 3 TFs
	Spring 08	160	Supervised 3 TFs
	Spring 10	165	Supervised 3 TFs
	Summer 10	15	Supervised 1 TF
	Summer 11	13	Supervised 1 TF
Summer 13	12	Supervised 1 TF	
Summer 16	13	Supervised 1 TF	

<u>Course Number and Title</u>		<u>Semester</u>	<u>Number of Students</u>	<u>Additional Information</u>
ES107	Climate and Earth System Science	Sum 17	17	
		Sum 18	14	
		Sum 19	21	
ES 222	Mineralogy	Fall 01	20	Co-taught with Associate Provost Carol Simpson
ES 302	Earth History	Spring 12	20	
		Spring 14	19	
ES/EE 351	Paleoclimatology/ Paleoceanography	Fall 02	19	
		Fall 03	26	
		Fall 04	20	
		Fall 05	28	
		Fall 06	37	
		Fall 07	24	
		Fall 08	25	
		Fall 09	13	
		Fall 10	26	
		Fall 11	24	
		Fall 12	22	
		Fall 13	17	
		Fall 14	18	
		Spring 19	16	
		Spring 21	23	
Spring 22	32			
Spring 23	26			
ES/EE371/671	Introduction to Geochemistry	Fall 15	20	
		Spring 17	9	
		Spring 18	10	
		Spring 21	10	
		Spring 22	9	
		Spring 23	15	
EE 557	Oceanography of Stellwagen Bank	Fall 20	12	Course for BU Marine Semester
		Fall 22	12	

<u>Course Number and Title</u>	<u>Semester</u>	<u>Number of Students</u>	<u>Additional Information</u>	
ES 571	Advanced Geochemistry	Spring 02	8	
ES 573	Analytical Methods in Geochemistry	Fall 01	7	Co-taught with Terry Plank Co-taught with Rick Murray
		Spring 05	13	
ES 574	Geochemical Modeling	Fall 03	13	Co-taught with Plank and Ethan Baxter Co-taught with Plank and Ethan Baxter
		Spring 06	9	
ES 576	Aquatic Geochemistry	Spring 07	10	
		Spring 10	4	
		Spring 11	7	
		Spring 13	12	
		Spring 16	7	
ES 834	Advanced Topics: Geochemical Cycles	Spring 03	11	Co-taught with ES Chair Rick Murray

Graduate Students

Kenneth A. Takagi, Ph.D. 2015, "Development of Calcium Stable Isotopes as a Tool to Understand Cycling of Calcium in Terrestrial Ecosystems".

Eric A. Moore, Ph.D. 2010, "Chemical Weathering and Organic Carbon Fluxes from the Fly River, Papua New Guinea".

Festo Lugolobi, Ph.D. 2010, "Chemical Weathering, Silica Sources, and Water Flowpaths in a Humid Tropical Watershed".

Allison M. Scribner, M.A., 2004, "Influence of Pedogenic Iron-Oxyhydroxides on the Ge/Si Weathering Tracer".

Tommy S. Moore, M.A., 2003, "Anaerobic Methane Oxidation and the Formation of Dolomite" (Co-advised with Rick Murray).

Undergraduate Student Theses

Completed:

Stephanie Kukolich, B.A. 2014, “Potential Effects of Radiogenic ⁴⁰Ca on the Calcium Isotopic Tracer at Hubbard Brook Experimental Forest.”

Michael Dyonisius, B.A., 2012, “Porewater Si cycling in New England Salt Marshes: reaction-advection-diffusion modeling and the Ge/Si tracer.”

Jessica Fitzsimmons, B.A., 2008, “Development of a Calcium Isotope Method in the Boston University Thermal Ionization Mass Spectrometry Facility.”

Scott Stachelhaus, B.A., 2006, “Ge/Si Fractionation during Diagenetic Formation of Chert.”

Aaron Burnett, B.A., 2003, “Historical Trends in Lead Pollution at Wells G and H Superfund Site, Woburn, MA, Revealed by LA-ICP-MS Analysis of Lead Isotopes Recorded in Tree Rings.”

Funded Research Proposals

A.C. Kurtz, Sole Principal Investigator

Title: *Partnering with the offshore sailing community to monitor marine microplastic pollution*
Funding Agency: PADI
Duration: June 2019-May 2020
Award Amount: \$4300

A.C. Kurtz, Sole Principal Investigator

Title: *Calcium isotopic response to disturbance at Hubbard Brook: acidification, deforestation, and recovery*
Funding Agency: National Science Foundation – Division of Earth Sciences – Geobiology and Low-Temperature Geochemistry
Duration: 9/13-8/15 with no cost extension to 8/17
Award Amount: \$170,371

A.C. Kurtz, Sole Principal Investigator

Title: *Acid rain response and recovery in New England forests: Application of the novel calcium isotope tracer to the Hubbard Brook streamwater sample archive*
Funding Agency: Massachusetts Water Resources Research Center
Duration: 3/13-2/14
Award Amount: \$5,000

E. Baxter, M. Jackson, A.C. Kurtz, and R.W. Murray

Title: *Facility Support: Phase Two of a NSF/Boston University partnership ensuring long-term technician support for the BU TIMS Facility*

Funding Agency: National Science Foundation – Division of Earth Sciences – Instrumentation and Facilities

Duration: 6/10-5/12

Award Amount: \$140,000

A.C. Kurtz, Sole Principal Investigator

Title: *Towards a chemical weathering rate chronometer: A U-series investigation of catena development in Kruger Park, South Africa*

Funding Agency: National Science Foundation – Division of Earth Sciences – Geobiology and Low Temperature Geochemistry

Duration: 9/1/08-8/30/10

Award Amount: \$27,663

A.C. Kurtz, Sole Principal Investigator

Title: *A Source-to-Sink study of chemical weathering in the Fly River system*

Funding Agency: National Science Foundation – Division of Ocean Sciences - Marine Geology and Geophysics Program – (MARGINS)

Duration: 5/1/06-4/30/08

Award Amount: \$174,853

A.C. Kurtz, Sole Principal Investigator (with G.D. Salvucci, Senior Personnel)

Title: *Silica sources and water flowpaths in a tropical watershed: a combined Ge/Si, oxygen isotope, and hydrometric study*

Funding Agency: National Science Foundation – Division of Earth Sciences – Hydrologic Sciences Program

Duration: 2/1/06-1/31/08

Award Amount: \$161,315

A.C. Kurtz, Sole Principal Investigator

Title: *Testing the “Wildfire Hypothesis”: Fossil-fuel burning as the cause of dramatic global warming 55 million years ago*

Funding Agency: American Chemical Society - Petroleum Research Fund

Duration: 5/1/05-4/30/07

Award Amount: \$35,000

A.C. Kurtz, A.White

Title: *Observatories for the Critical Zone Exploration Network: Rio Icacos and Luquillo Mountains, Puerto Rico*

Funding Agency: National Science Foundation – Division of Earth Sciences – subcontract via The Pennsylvania State University

Duration: 7/1/06-6/30/08

Award Amount: \$18,046

L.A. Derry, O.A. Chadwick, A.C. Kurtz

Title: *Collaborative Research: Ge/Si as a tracer of terrestrial silica cycling*
 Funding Agency: National Science Foundation – Division of Earth Sciences – Geology and Paleontology Program
 Duration: 3/1/03-2/28/06
 Award Amount: \$70,794 (BU portion)

E. Baxter, A.C. Kurtz, T. Plank and R.W. Murray

Title: *Acquisition and Development of a Thermal Ionization Mass Spectrometry Facility at Boston University.*
 Funding Agency: National Science Foundation – Division of Earth Sciences - Major Research Instrumentation
 Duration: 7/05-6/06
 Award Amount: \$749,814

T. Plank, A.C. Kurtz, R.W. Murray

Title: *Technician Support: Laser Ablation and Inductively Coupled Plasma Laboratories – Phase I*
 Funding Agency: National Science Foundation - Division of Earth Sciences – Instrumentation and Facilities Program
 Duration: 3/1/03-2/28/06
 Award Amount: \$210,000

T. Plank, A.C. Kurtz, R.W. Murray

Title: *Technician Support: Laser Ablation and Inductively Coupled Plasma Laboratories – Renewal*
 Funding Agency: National Science Foundation - Division of Earth Sciences – Instrumentation and Facilities Program
 Duration: 3/1/06-2/28/07
 Award Amount: \$160,000

Professional Service

Local Organizing Committee for 2018 Goldschmidt Conference Committee of five New England academic geochemists working to plan an international geochemistry conference of several thousand attendees that will take place August 2018.

Journal Article Reviews for Nature, Geology, Geochimica et Cosmochimica Acta, Chemical Geology, Earth and Planetary Science Letters, GSA Today, Biogeochemistry, Ecology, Palaios, Applied Geochemistry, JGR Earth Surface, American Journal of Science, Ecosystems, Earth Surface Processes and Landforms, Geochemical Journal

Panelist for NSF-EAR Geobiology and Low-Temperature Geochemistry program

Proposal Reviews for NSF programs in Geology and Paleontology, Chemical Oceanography, Marine Geology, Geomorphology and Land Use Dynamics, MARGINS, Low-Temperature Geochemistry and Biogeochemistry, Hydrology, Ecosystems; UK National Research Council; American Chemical Society – Petroleum Research Fund, NIH Superfund Program, NASA

Member of Committee of Scientists, Hubbard Brook Ecosystem Study, 2014-present. Committee made of scientists actively conducting research at Hubbard Brook, meets biannually to discuss current and future research objectives for the study.

Invited Participant, “Integration and Synthesis of Margins Sediment Source to Sink Research” an NSF-MARGINS sponsored workshop in Gisborne, New Zealand, April 2009.

Invited Participant, “CZEN Data and Information Workshop”, an NSF-sponsored workshop to improve cyber-infrastructure for Critical Zone research. Penn State University, September, 2007.

Invited Participant, “Teleconnections Between Source and Sink in Sediment Dispersal Systems Theoretical and Experimental Institute” an NSF-MARGINS sponsored workshop in Northern California, September, 2006.

Participant and Site Proposer, “Frontiers in Exploration of the Critical Zone”, an NSF-sponsored workshop to develop a network of field sites for interdisciplinary research on the geochemistry and hydrology of soils. University of Delaware, October, 2005.

Judge for student posters in AGU Volcanology, Geochemistry, and Petrology, and Hydrology sections, 2004 Annual Meeting, San Francisco.

Session chair (poster) for AGU Volcanology, Geochemistry, and Petrology section “Applications of Metal Stable Isotopes in Low-Temperature Geochemistry and Biogeochemistry”, 2004 Annual Meeting, San Francisco.

Organizer and session co-chair (oral and poster) for American Geophysical Union hydrology section "Linkages Between Physical Erosion and Chemical Weathering", 2004 Annual Meeting, San Francisco.

Invited participant, Hawaiian Ecosystems Project workshop: "Geochemistry of Soil Weathering Processes", University of California, Santa Barbara, March, 2003.

Invited Participant, RiOMar Workshop, an NSF-sponsored workshop on "River-Dominated Ocean Margins" at Tulane University, November, 2001.

Session chair (oral) at Goldschmidt Conference, Cambridge, MA, August, 1999.

Session chair (oral) at Geological Society of America annual meeting, Toronto, October 1998.

University Service

Associate Director – BU Marine Program (Fall 2022-present)

Director of Graduate Studies – Department of Earth and Environment (Summer 2016-Summer 2019, Summer 2020-present)

GRS Graduate Academic Affairs Committee (Fall 2016-Summer 2019) Committee works with Associate Dean of the Graduate School to evaluate changes to graduate programs and courses.

Associate Director of BU Core Curriculum – (Fall 2016-Fall 2019) Group of eight Associate Directors meets monthly to implement changes to Core Curriculum courses and policies, plan Core events.

Associate Chairman and Director of Graduate Studies – Department of Earth and Environment (Fall 2012 – Summer 2013)

Associate Chairman – Department of Earth Sciences (2007-2008, 2009-2011)

Director of Graduate Studies – Department of Earth Sciences (Fall 2006-Summer 2010) Responsible for overseeing progress of ~25 M.S. and Ph.D. students, allocating Teaching Fellowships, running graduate student seminar series.

Tenure and Promotion Working Group – (Spring 2008) Served on a subcommittee of Boston University Faculty Council Committee on Faculty Policies with several BU faculty, CAS Dean Sapiro, BU Provost Campbell, to critically evaluate BU's tenure and promotion process, make recommendations for improvement.

Tectonics Faculty Search Committee (Fall 2013-Spring 2014)

Terrestrial Hydrology Faculty Search Committee (Spring 2009) Department committee to write a job advertisement, evaluate applications, and interview candidates, and ultimately hire in field of "Terrestrial Hydrology".

Organic Carbon Dynamics Faculty Search Committee (Fall 2006 – Spring 2008) Department committee to write a job advertisement, evaluate applications, and interview candidates, and ultimately hire in field of "Organic Carbon Dynamics".

College of Arts and Sciences Natural Science Curriculum Committee (2003-2006) Committee evaluates and makes recommendations regarding new and revised courses in natural sciences.

Member of Boston University Environmental Science Curriculum Committee (Spring 2005-present) Inter-departmental committee provides oversight and guidance regarding the curriculum and related academic dimensions of the Environmental Science program.

Surface Processes Faculty Search Committee (Fall 2003 – Spring 2006) Department committee to write a job advertisement, evaluate applications, and interview candidates, and ultimately hire in field of "Earth Surface Processes".

Judge, Science and Technology Day (March 2003, 2004, 2005, 2006) Faculty judge for student presentations at College-wide Science and Technology Day.

Coordinator, Earth Sciences Department Seminar Series (2002-2003 and 2003-2004 academic years) Responsible for organizing and inviting scientists from other institutions to lecture to department on current research. Approximately 22 lectures/year.

Earth Sciences Graduate Entrance Committee (Fall '02-present) Departmental committee to evaluate incoming ES graduate students and make recommendations regarding future coursework.

Graduate thesis committees Served as committee member for >25 Boston University Earth Sciences and Earth and Environment graduate students (M.A. and Ph.D.)

Invited Lectures and Presentations (short titles)

MIT, Earth and Atmospheric Sciences	10/11	Silica cycle and Ge/Si
Chapman Conference	1/11	Fly River Geochemistry
Harvard University, Earth Sciences	11/10	Fly River Weathering
Boston University, Terrestrial Biogeo	10/10	Fly River Weathering
American Geophysical Union, San Fran.	12/09	Ge/Si and Hydrology
Goldschmidt Conference, Davos	6/09	Fly River Geochemistry
Woods Hole Oceanographic Institution	7/08	Ge/Si and Hydrology
University of New Hampshire	11/07	Ge/Si and Hydrology
Woods Hole Oceanographic Institution	10/06	Fires and the PETM
Yale University, Geology Dept.	3/06	Fires and the PETM
Earth Systems Processes, Calgary, AB	8/05	South Africa soils
Goldschmidt Conference, Moscow, ID	5/05	Puerto Rico weathering
Geological Society of London	12/02	Paleocene carbon cycle
Boston University, Geography Dept.	11/02	Dust in Hawaiian soils
GES-6, Honolulu, HI, May, 2002	5/02	Dust in Hawaiian soils
Syracuse University, Spring, 2002	3/02	Dust in Hawaiian Soils

University of Pittsburgh, Spring, 2001	2/01	Ge/Si as a weathering tracer
Boston University, Earth Sciences	1/01	Ge/Si as a weathering tracer
Boston University, Earth Sciences	1/01	Paleocene carbon cycle
Penn State University, Geosciences	11/99	Ge/Si as a weathering tracer

Other Significant Accomplishments

Featured Scientist in Harvard-Smithsonian Educational Video Project: I served as a scientific consultant and was interviewed on air for a series of earth science educational videos produced by Harvard Smithsonian Center for Astrophysics. Filmmakers from Harvard-Smithsonian interviewed me on campus in February, 2003, and on location in Hawaii during my summer 2003 field season. Programs were shown on the Annenberg/CPB network beginning March, 2005. Series title is: *Essential Science for Teachers: Earth and Space Science*. I am featured in *Session 1. Earth's Solid Membrane: Soil*.

International research recognition: Paleooceanography paper on the Early Cenozoic carbon cycle (Kurtz et al., 2003) was profiled in a three page *News and Views* article in *Nature* (Weissert and Bernasconi, *Nature* v. 428, p.130-132). The paper was also cited in a subsequent *News and Views* article (Dickens, *Nature* v. 429, p. 513-515), and a *Perspectives* article in *Science* (Schrag and Alley, *Science* v. 306, p 821-822).

Field Research

Shipboard (*R/V Tahua Chief*) and shore-based study of solute and sediment fluxes in Fly River system, Papua New Guinea

Installation of hydrometric equipment (lysimeters, piezometers, tensiometers) and water sampling for geochemical analysis, Luquillo, PR (March and November, 2006)

Characterization of catena sequences, soil and geologic sampling, Kruger National Park, South Africa. (April, 2005)

Soil, sediment, water sampling at Luquillo, Puerto Rico. (2003, 2004)

Soil and stream water sampling on Hawaiian Islands (Hawaii, Maui, Kauai). (1997, 1998, 1999, 2001, 2002, 2003)

Field calibration of ice core melt-layer paleothermometer, snow and ice sampling, Siple Dome, Antarctica. (2000)

Collection of atmospheric aerosols, *R/V Weatherbird II*, Sargasso Sea. (August, 1998)

Geologic sampling in and around El Teniente copper mine, Chile. (March, 1995)

Geologic mapping in western Montana, SIU summer field geology course. (1992)

Geochemical Laboratory Research

ICP-MS (Cornell U., Penn State U., Boston U.; VG Plasmaquad II+; Finnigan ELEMENT I and II, VG PQ ExCell); Developed hydride generation systems for determination of germanium by isotope-dilution; Routine trace element analysis of rocks, soils, and waters.

TIMS (Cornell U., VG Sector 54, Boston U. TRITON); Sr, Nd, Pb, Ca isotopic analysis of rocks and soils, and waters.

ICP-AES; (Boston U., JY Ultima-C) Routine analysis of major and trace elements of rocks, soils, and natural waters.

INAA (Cornell TRIGA facility); Trace element analysis of rocks.

Electron Microprobe (Cornell U., JEOL 733 Superprobe); Major element analysis of minerals in thin section; rock major elements on fused powders.

X-ray diffraction (Penn State U., Boston U.) Identification of crystalline phases in soils and sediments.

Peer-Reviewed Publications

(** denotes graduate advisees; # denotes undergraduate advisees)

#Williams, O., A.C. Kurtz, M.E. Eagle⁴ and K.D. Kroeger, JJ. Tamborski, and J.C Carey (2022) Mechanisms and Magnitude of Dissolved Silica Release from a New England Salt Marsh. *Biogeochemistry* v. 161, p. 251-271.

Carey, J., Gewirtzman, J., Johnston, S., Kurtz, A.C., Tang, Jianwu, Viellard, A., Spencer, R. (2020) Arctic river dissolved and biogenic silicon exports - current conditions and future changes with warming. *Global Biogeochemical Cycles* **34**(3):Mar 2020

Gewirtzman, J., Tang, J., Melillo, J.M., William J. Werner, W.J., Kurtz, A.C., Fulweiler, R.W., Carey, J.C. (2019) Soil warming accelerates biogeochemical silica cycling in a temperate forest. *Frontiers in Plant Science*, v. 10, doi: 10.3389/fpls.2019.01097.

Buss, H.L., M.C. Lara, O.W. Moore, A.C. Kurtz, M.S. Schultz, A.F. White (2017) Lithological Influences on Contemporary and Long-Term Regolith Weathering at the Luquillo Critical Zone Observatory. *Geochimica et Cosmochimica Acta*, v.196, p.224-251.

- Goni, M., **E. Moore, A.C. Kurtz, E. Portier, Y. Alleau, D. Merrell. (2014) Organic matter compositions and loadings in soils and sediments along the Fly River, Papua New Guinea. *Geochimica et Cosmochimica Acta*, v.140, p.275-296.
- A.C. Kurtz, **F. Lugolobi, G.D. Salvucci. (2011) Solute sources and water flowpaths during storm events in the Rio Icacos watershed. *Water Resources Research*, v.47, W06516, doi:10.1029/2010WR009853.
- **F. Lugolobi, A.C. Kurtz, and L.A. Derry. (2010) Germanium-silicon fractionation in a tropical, granitic weathering environment. *Geochimica et Cosmochimica Acta*, v.74, p.1294-1308.
- Pett-Ridge, J.C., L.A. Derry, and A.C. Kurtz. (2009) Sr isotopes as a tracer of weathering processes and dust inputs in a tropical granitoid watershed, Luquillo Mountains, Puerto Rico. *Geochimica et Cosmochimica Acta*, v.73, p.25-43.
- **E. Moore and A.C. Kurtz (2008) Black carbon in Paleocene-Eocene boundary sediments: A test of biomass combustion as the PETM trigger, *Palaeogeography, Palaeoclimatology, Palaeoecology*, v.267, p.147-152.
- "A. Burnett, A.C. Kurtz, D. Brabander, M. Shailer (2007) Dendrochemical record of historical Pb contamination sources, Wells G&H Superfund site, Woburn, Massachusetts. *Journal of Environmental Quality*, v.36, p.1488-1494.
- **Scribner, A.M., A.C. Kurtz, O.A. Chadwick (2006) Germanium sequestration by soil: targeting the roles of secondary clays and Fe-oxyhydroxides, *Earth and Planetary Science Letters* v.243, p. 760-770.
- Derry, L. A., J. C. Pett-Ridge, A. C. Kurtz, and J. W. Troester (2006), Ge/Si and $^{87}\text{Sr}/^{86}\text{Sr}$ tracers of weathering reactions and hydrologic pathways in a tropical granitoid system, *Journal of Geochemical Exploration*, 88(1-3), 271-274.
- Derry, L.A., A.C. Kurtz, K. Ziegler, O.A. Chadwick (2005) Biological control of terrestrial silica cycling and export fluxes to watersheds, *Nature*, v. 433, p. 728-731, doi:10.1038/nature03299.
- Kay, S.M., E. Godoy, and A.C. Kurtz. (2005) Episodic arc migration, crustal thickening, subduction erosion, and magmatism in the south-central Andes. *Geological Society of America Bulletin* v. 117, p. 67-88.
- **Moore, T.S., R.W. Murray, A.C. Kurtz, D. P. Schrag. (2004) Anaerobic methane oxidation and the formation of dolomite. *Earth and Planetary Science Letters*, v. 229, p.141-154.

- Kurtz, A.C. and Derry, L.A., 2004, Tracing silicate weathering and terrestrial silica cycling with Ge/Si ratios, in Wanty, R.B., and Seal, R.R., eds., *11th International Symposium on Water Rock Interaction*: Lisse, The Netherlands, Swets & Zeitlinger Pubs, 833-837.
- Kurtz, A.C., L.R. Kump, M.A. Arthur, J.C. Zachos, and A. Paytan. (2003) Early Cenozoic decoupling of the global carbon and sulfur cycles. *Paleoceanography* v.18doi:10.1029/2003PA000908.
- Kurtz, A.C., L.A. Derry, and O.A. Chadwick. (2002) Germanium/silicon fractionation in the weathering environment. *Geochimica et Cosmochimica Acta* v. 66, p. 1525-1537.
- Kurtz, A.C., L.A. Derry, and O.A. Chadwick. (2001) Accretion of Asian dust to Hawaiian soils: isotopic, elemental, and mineral mass balances. *Geochimica et Cosmochimica Acta* v. 65, p. 1971-1983.
- Kurtz, A.C., L.A. Derry, O.A. Chadwick, and M. J. Alfano. (2000) Refractory element mobility in volcanic soils. *Geology*, v. 28, p. 683-686.
- Filippelli, G.M., J.W. Carnanhan, L.A. Derry, and A.C. Kurtz. (2000) Terrestrial paleorecords of Ge/Si cycling derived from lake diatoms. *Chemical Geology*, v. 168, p. 9-26.
- Kurtz, A.C., S.M. Kay, R. Charrier, and E. Farrar. (1997) Geochronology of miocene plutons and Andean uplift history in the El Teniente region, central Chile (34°S-35°S). *Revista Geologica de Chile*. vol. 24, no. 1, p 75-90.

Technical Reports (non peer-reviewed)

- Kay, S.M., A.C. Kurtz, 1995. Magmatic and tectonic characterization of the El Teniente region. *Final Report to Division El Teniente, CODELCO-Chile*, 180 pp.

Seminar and Conference Contributions

Invited

- Kurtz, A.C. and E.A. Moore, Upland weathering processes in the Fly River system, *AGU Chapman Conference on Source to Sink Systems Around the World and Through Time*, Oxnard, CA, January 2011.
- Kurtz, A.C., F. Lugolobi, and G.D. Salvucci, Integrating geochemical tracers with physics-based modeling to understand Rio Icaos storm response, *American Geophysical Union*, Fall Meeting 2009.

- Moore, E.A., and A.C. Kurtz, A multiproxy approach to understanding floodplain weathering in the Fly River System, Papua New Guinea, *American Geophysical Union*, Fall Meeting 2009.
- Kurtz, A.C. and E.A. Moore, Controls on the Strontium flux of the Fly River, Papua New Guinea. *2009 Goldschmidt Conference*, Davos, Switzerland, June, 2009.
- Kurtz, A.C., L. Khomo, L., O.A. Chadwick, T. Hartshorn, A. Heimsath, Hillslope weathering dynamics in a South African semi-arid savanna. *Earth Systems Processes* 2, Calgary, AB, August, 2005.
- Kurtz, A.C., J.C. Pett-Ridge, F. Lugolobi, L.A. Derry, and J. Troester. Solute sources in a tropical granitoid watershed, Luquillo, Puerto Rico. *15th Annual Goldschmidt Conference*, Moscow, ID, May, 2005
- Kurtz, A.C., L.R. Kump, M.A. Arthur, J.C. Zachos, A. Paytan, Paleogene decoupling of the global carbon and sulphur cycles. Organic-carbon burial, climate change and ocean chemistry (Mesozoic-Paleogene), *Geological Society of London*, Burlington House, London, Dec. 9-11, 2002.
- Kurtz, A.C., L.A. Derry, O.A. Chadwick, The impact of Asian dust on Hawaiian ecosystems. *Sixth International Symposium on the Geochemistry of the Earth's Surface*, 2002., p. 87-89.

Contributed

- Williams, O., J.C. Carey, A.C. Kurtz, M.E. Eagle⁴ and K.D. Kroeger, Mechanisms of Silica Availability in a New England Salt Marsh. *American Geophysical Union*, Fall Meeting 2020.
- Aguirre, A.A., L.A. Derry, A.C. Kurtz, Ge/Si as a tracer for Si in paired catchments of the Luquillo CZO. *Goldschmidt Conference 2018*, Boston, MA.
- Ward, B.M., C.I. Wong, A.C. Kurtz, Delineating controls on speleothem-based moisture proxies in a Brazilian cave. *PAGES – Past Global Changes: The Karst Record VIII Conference*, Austin, TX, May 2017.
- Kurtz, A.C., K. Takagi, S. Bailey, T. Bullen, Application of Ca stable isotopes to long term changes in the Ca cycle of a Northern Hardwood Forest. *American Geophysical Union*, Fall Meeting 2015.
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