

Kira Trillium Lawrence

*Lafayette College, Department of Geology and Environmental Geosciences
102 Van Wickle Hall, Easton, PA 18042
lawrenck@lafayette.edu
Phone #: 610-330-5194*

EDUCATION

Brown University, Providence, RI

- Ph.D., Geological Sciences (May 2006)
Thesis Title: Characterizing the Plio-Pleistocene Evolution of Sea Surface Conditions Using the Alkenone Organic Proxy
Advisor: Dr. Timothy Herbert, Paleoclimatology and Paleoceanography
- M.Sc., Geological Sciences (May 2003)
Thesis: No Significant Late Quaternary Sea Surface Warming in the Western Coral Sea: Implications for the Growth of the Australian Great Barrier Reef
Advisor: Dr. Timothy Herbert, Paleoclimatology and Paleoceanography

University of California - Santa Cruz, Santa Cruz, CA

- M.S., Earth Sciences (August 2001)
Thesis: Terrestrial Climatic Response to Precessional Orbital Forcing in the Eocene
Advisor: Dr. Lisa C. Sloan, Paleoclimatology

Dartmouth College, Hanover, NH

- A.B., Earth Sciences, Summa Cum Laude (June 1996)
Honors Thesis: An Analysis of Factors Influencing Pixel Brightness Values in Satellite Imagery
Advisor: Dr. Richard W. Birnie, Remote Sensing

PROFESSIONAL EXPERIENCE

Lafayette College, Department of Geology and Environmental Geosciences

- Department Head (2015–present)
- Co-Chair of the Environmental Science and Studies Programs (2014–present)
- Associate Professor (July 2012–present)
- Assistant Professor (2006–2012)
- Courses Taught:
 - Geology 115 – Earth: Evolution of a Habitable Planet
 - Geology 190 – Climate Change and Human Civilizations
 - Geology 205 – Oceanography
 - Geology 315 – Paleoclimatology and Paleoceanography
 - EVST 290 – Climate Change: The Facts, The Issue & The Long-Term View
 - EVST 390 – Environmental Studies Independent Study
 - EVST 400 – Environmental Capstone

- Research Students:
 - Joanna Morabito '08 (2007)
 - Laura Bochner '10 (2008-2010) Honors Thesis
 - Hilary White '10 (2008-2010) Honors Thesis
 - Sean Murphy '10 (2009)
 - Alexandria Brannick '12 (2010-2011)
 - Christopher Kelly '13 (2011-2013) Honors Thesis
 - Julia Seidenstein '14 (2012)
 - Hollis Miller '15 (2013-2014)
 - Rachel Griffiths '14 (2013)
 - Caroline Ladlow '16 (2014)
 - Devon Gorbey '15 (2014-2015) Honors Thesis
 - Haley Mauriello '18 (2015-2016)
 - Hana Isihara '17 (2016)

Brown University, Department of Earth, Environmental and Planetary Sciences

- Adjunct Associate Professor (2012–present)
- Adjunct Assistant Professor (2006–2012)

Rutgers University, Institute of Marine and Coastal Sciences

- Visiting Associate Professor (2013–2014)
- Visiting Assistant Professor (2009–2010)

University of California Santa Cruz, Department of Ocean Sciences

- Visiting Assistant Professor (Spring 2010)

Brown University, Department of Geological Sciences

- Teaching & Research Assistant (2001–2006)
- Lab Instructor: Earth Systems History; Sedimentology and Stratigraphy; Estuarine Oceanography

University of California Santa Cruz, Department of Earth Sciences

- Teaching & Research Assistant (1999–2001)
- Lab Instructor: Geomorphology; Sedimentology and Stratigraphy

The Woods Hole Research Center, Woods Hole, MA

- Research Assistant (1997–1999)

Worcester Academy, Worcester, MA

- Faculty Member, Athletic Coach (1996–1997)
- Courses Taught: Earth Science; Pre-Algebra

US Geologic Survey, Reston, VA

- NAGT Intern (Summer 1996)

HONORS AND AWARDS

- Distinguished Lecturer for the Ocean Discovery Lecture Series, U.S. Science Support Program for the International Ocean Discovery Program (2016–2017)
- Lafayette College Thomas Roy and Lura Forrest Jones Lecture Award - *in recognition for excellence in teaching and scholarship* (Spring 2012)
- Lafayette College James E. Lennertz Prize for Exceptional Teaching and Mentoring (Spring 2010)
- Finalist for the Lafayette College Student Government Superior Teaching Award (2006-2007)
- Sigma Xi Outstanding Graduate Student Award (Spring 2006)
- Brown University Dissertation Fellowship (Spring 2006)
- Brown University Presidential Award for Excellence in Teaching—*awarded annually to two Brown Graduate Students* (2005)
- Brown University Sheridan Center for Teaching in Higher Education Academic Teaching Certificate (2005)
- Gretchen L. Blechschmidt Award—*awarded annually by GSA to one female student pursuing a research project in biostratigraphy and/or paleoceanography* (2004)
- Geological Society of America Outstanding Student Research Award (2004)
- National Science Foundation Fellowship (2000-2003)
- UC Santa Cruz Earth Science Department Outstanding TA Award (1999–2000)
- Honorable Mention National Science Foundation Fellowship (1999)
- Dartmouth College Chapter of Phi Beta Kappa (1996)
- Dartmouth College Department of Earth Sciences High Honors (1996)
- New Hampshire NASA Space Grant Fellow (1996)
- Dartmouth Women’s Basketball Larry Levitt Leadership Award (1994, 1996)
- Ivy League Academic All-Ivy Team Women’s Basketball (1994)

RESEARCH INTERESTS

Paleoclimatology and Paleoceanography, Earth Systems History, Past Warm Climate Intervals, Influence of Milankovitch Cycles on Late Cenozoic Climate, Glaciation of the Northern Hemisphere, Alkenone Paleothermometry, Past Ocean Productivity.

GRANTS

- Principal Investigator, Lafayette College Faculty Research Grant (April 2015) “*Constraining the Size of the Greenland Ice Sheet during the Most Recent Interval of Sustained Warmth*” \$3218.
- Principal Investigator, National Science Foundation, OCE-1304366 (Spring 2013 – Spring 2016) “*Southern Hemisphere Processes and Global Climate Change: The Evolution of Late Miocene to Present Surface Ocean Conditions in the Southern Hemisphere*” \$159,300.

- Principal Investigator, Lafayette College Faculty Research Grant (January 2013) “*Hemispheric Symmetry of Earth’s Climate Evolution Over the Past Six Million Years*” \$3000.
- Principal Investigator, National Science Foundation OCE-0623310-003 Supplement (August 2010 – August 2011) “*High latitude temperature and biological responses to Plio-Pleistocene global change*” \$7,000.
- Co-Proposer, Lafayette College Fund for Faculty Innovation (Spring 2009 – Fall 2010) “*2nd edition: An Interdisciplinary Seminar Series in the Life Sciences*” \$24,300.
- Co-Proposer, Lafayette College Fund for Faculty Innovation (Spring 2007 – Spring 2008) “*An Interdisciplinary Seminar Series in the Life Sciences*” \$21,000.
- Principal Investigator, National Science Foundation OCE-0623310 (October 2006 – August 2011) “*High latitude temperature and biological responses to Plio-Pleistocene global change*” \$96,660. (NSF Collaborative Research Proposal with Dr. T.D. Herbert from Brown University).
- Principal Investigator, Geological Society of America Research Grant 7725-04 (2004) “*Evolution of Pliocene Atlantic Meridional Temperature Gradients*” \$2500.
- Principal Investigator, Evolving Earth Foundation Student Research Grant (2003) “*The Pliocene Climate Transition: A North Atlantic Perspective*” \$3000.
- Principal Investigator, Geological Society of America Research Grant 7447-03 (2003) “*Evolution of Sea Surface Temperatures in the Eastern Equatorial Pacific During the Pliocene Climate Transition*” \$2500.

MANUSCRIPTS (IN PROGRESS)

(*=**Lafayette College Student**; ^=**ugrad non-Lafayette**):

1. Herbert, T.D., **K.T. Lawrence**, A. Tzanova, L.C. Peterson, R. Cabellero-Gill, and C. Kelly* (*Resubmitted, Nature Geoscience, May 2016*) Global Cooling in the late Miocene – a Precursor to Northern Hemisphere Glaciation.
2. Mejia, L.M., A. Mendez-Vicente, L. Abrevaya, **K.T. Lawrence**, C. Ladlow*, C. Bolton, H. Stoll (*in review, EPSL, May 2016*) A diatom record of CO₂ decline since the late Miocene.
3. **Lawrence, K.T.**, S. Woodard, L. Bochner *, D. Gorbey*, and L.C. Peterson, (*in prep*) An Assessment of the Consistency of Alkenone, Mg/Ca, and Faunal Sea Surface Temperature Estimates Using Records from the Plio-Pleistocene.
4. Peterson, L.C., **K.T. Lawrence**, T.D. Herbert, H. Miller*, J. Wilson^, A. Brannick*, (*in prep*). Plio-Pleistocene Climate Change: Evolution or Revolution.

5. Straub, M., A. Martinez-Garcia, H. Ren, **K.T. Lawrence**, D.M. Sigman, and G.H. Haug, (*in prep*). Reduced North Atlantic N fixation during the Pliocene epoch.

PUBLICATIONS (PEER-REVIEWED) (*=Lafayette College Student):

1. Fedorov, A., N. Burls, **K.T. Lawrence**, L.C. Peterson. 2015. Tightly linked ocean zonal and meridional temperature gradients over the past 5 million years. *Nature Geoscience*, 8, 975-980, doi:10.1038/NGEO2577.
2. Ravelo, A.C., **K.T. Lawrence**, A. Fedorov, and H.L. Ford. 2014. Comment on “A 12-Million-Year Temperature History of the Tropical Pacific Ocean.” *Science*, 346, 6216, doi:10.1126/science/1257618.
3. Woodard, S.C., Y. Rosenthal, K.G. Miller, J.D. Wright, B.K. Chiu, and **K.T. Lawrence**. 2014. Antarctic Role in Northern Hemisphere Glaciation, *Science*, 346, 6211, 847-851, doi: 10.1126/science/1255586.
4. **Lawrence, K.T.**, D.M. Sigman, T.D. Herbert, C.A. Riihimaki, C.T. Bolton, A. Martinez-Garcia, A. Rosell-Mele, and G. Haug. 2013. Time-transgressive productivity changes in the North Atlantic upon Northern Hemisphere glaciation, *Paleoceanography*, 28, doi 10.1002/2013PA002546.
5. **Lawrence, K.T.**, I. Bailey, I. M.E. Raymo. 2013. Re-evaluation of the age model for North Atlantic Ocean Site 982: Arguments for a Return to the Original Chronology. *Climate of the Past*, 9, 2391-2397, doi 10.5194/cp-9-2391-2013.
6. Fedorov, A., C.M. Brierley, **K.T. Lawrence**, Z. Liu, P. Dekens, and A.C. Ravelo. 2013. Patterns and Mechanisms of early Pliocene Warmth, *Nature*, 496, 43-49, doi:10.1038/nature12003.
7. Bolton, C.T., **K.T. Lawrence**, S.J. Gibbs, P.A. Wilson, and T.D. Herbert. 2011. Biotic and geochemical evidence for a global latitudinal shift in ocean biogeochemistry and export productivity during the late Pliocene, *Earth and Planetary Science Letters*, 308, 200-210, doi:10.1016/j.epsl.2011.05.046.
8. **Lawrence, K.T.**, S. Sosdian, H.E., White*, Y. Rosenthal. 2010. North Atlantic climate evolution through the Plio-Pleistocene climate transitions, *Earth and Planetary Science Letters*, 300, 329-342, doi: 10.1016/j.epsl.2010.10.013.
9. Bolton, C.T., **K.T. Lawrence**, S.J. Gibbs, P.A. Wilson, L.C. Cleaveland, and T.D. Herbert. 2010. Glacial-interglacial productivity changes recorded by alkenones and microfossils in late Pliocene eastern equatorial Pacific and Atlantic upwelling zones, *Earth and Planetary Science Letters*, 295, 3-4, 401-411, doi:10.1016/j.epsl.2010.04.014.

10. Herbert, T.D., L.C. Peterson, **K.T. Lawrence**, and Z. Liu. 2010. Tropical Ocean Temperatures Over the Past 3.5 Million Years, *Science*, 328, 1530-1534.
11. Caissie, B.E., J. Brigham-Grette, **K.T. Lawrence**, T.D. Herbert, and M. Cook, 2010. Last Glacial Maximum to Holocene sea surface conditions at Umnak Plateau, Bering Sea as inferred by diatom, alkenone, and stable isotope records, *Paleoceanography*, 25, PA1206, doi:10.1029/2008PA001671.
12. **Lawrence, K.T.**, T.D. Herbert, C.M. Brown, M.E. Raymo, and A.M. Haywood. 2009. High-amplitude variations in North Atlantic sea surface temperature during the early Pliocene warm period, *Paleoceanography*, 24, PA2218, doi: 10.1029/2008PA001669.
13. Brierley, C.M., A.V. Fedorov, Z. Liu, T.D. Herbert, **K.T. Lawrence**, and J.P. LaRiviere. 2009. Greatly Expanded Tropical Warm Pool and Weakened Hadley Circulation in the Early Pliocene, *Science*, 323, 1714-1718.
14. Ruggieri, E., T.D. Herbert, **K.T. Lawrence**, and C.E. Lawrence. 2009. Change point method for detecting regime shifts in paleoclimatic time series: Application to $\delta^{18}\text{O}$ time series of the Plio-Pleistocene, *Paleoceanography*, 24, PA1204, doi:10.1029/2007PA001568.
15. Robinson, M.M., H.J. Dowsett, G.S. Dwyer, and **K.T. Lawrence**. 2008. Reevaluation of mid-Pliocene North Atlantic sea surface temperatures, *Paleoceanography*, 23, PA3213, doi:10.1029/2008PA001608.
16. **Lawrence, K.T.**, T.D. Herbert, P.S. Dekens, and A.C. Ravelo. 2007. The application of the alkenone organic proxy to the study of Plio-Pleistocene climate, *In* Williams, M., Haywood, A.M., Gregory F.J. and D.N. Schmidt (eds) "Deep Time Perspectives on Climate Change: Marrying the Signal from Computer Models and Biological Proxies." *The Micropalaeontological Society Special Publications*, The Geological Society, London, 539-562.
17. Ravelo, A.C., K. Billups, P.S. Dekens, T.D. Herbert, and **K.T. Lawrence**. 2007. Onto the ice ages: proxy evidence for the onset of Northern Hemisphere glaciation, *In* Williams, M., Haywood, A.M., Gregory F.J. and D.N. Schmidt (eds) "Deep Time Perspectives on Climate Change: Marrying the Signal from Computer Models and Biological Proxies." *The Micropalaeontological Society Special Publications*, The Geological Society, London, 563-573.
18. **Lawrence, K.T.**, Z. Liu, and T.D. Herbert. 2006. Evolution of the Eastern Tropical Pacific Through Plio-Pleistocene Glaciation, *Science*, 312, 79-83.
19. **Lawrence, K.T.**, and T.D. Herbert. 2005. Late Quaternary sea-surface temperatures in the western Coral Sea: Implications for the growth of the Australian Great Barrier Reef, *Geology*, 33, 677-680.

20. **Lawrence, K.T.**, L.C. Sloan, and J.O. Sewall. 2003. Terrestrial climatic response to precessional orbital forcing in the Eocene, *In* Wing, S.L., Gingerich, P.D., Schmitz, B., and Thomas, E. (eds), "Causes and Consequences of Globally Warm Climates in the Early Paleogene." *GSA Special Paper 369*, 65-77.
21. Houghton, R.A., **K.T. Lawrence**, J.L. Hackler, and S. Brown. 2001. The spatial distribution of forest biomass in the Brazilian Amazon: a comparison of estimates, *Global Change Biology*, 7, 731-746.
22. Houghton, R.A., J.L. Hackler, and **K.T. Lawrence**. 2000. Changes in terrestrial carbon storage in the United States. 2: The role of fire and fire management, *Global Ecology and Biogeography*, 9, 145-170.
23. Houghton, R.A., D.L. Skole, C.A. Nobre, J.L. Hackler, **K.T. Lawrence**, and W.H. Chomentowski. 2000. Annual fluxes of carbon from deforestation and regrowth in the Brazilian Amazon, *Nature*, 403, 301-304.
24. Houghton, R.A., J.L. Hackler, and **K.T. Lawrence**. 1999. The US Carbon Budget: Contributions from Land-Use Change, *Science*, 285, 574-578.

ABSTRACTS (*=Lafayette College Student; ^=ugrad non-Lafayette)

1. K. Blake-Mizen, I. Bailey, A. Carlson, J. Stoner, J. Hatfield, C. Xuan, and **K.T. Lawrence**, 2016. Reconstructing southern Greenland Ice Sheet History During the Intensification of Northern Hemisphere Glaciation: Insights from IODP U1307, European Geophysical Union General Assembly Meeting, Vienna, Austria, March 17th-22nd, 2016.
2. **K.T. Lawrence**, 2016. **INVITED** - Exploring Plio-Pleistocene Surface Conditions Using the Alkenone Organic Proxies, *Northeast GSA Abstracts with Programs 48, No 2*. Abstract # 272087, Paper No. 32-1.
3. H. Mauriello*, **K.T. Lawrence**, and L.C. Peterson, 2016. A Preliminary Assessment of Hemispheric Climate Symmetry during the Pliocene: Insights from ODP 1088, *Northeast GSA Abstracts with Programs 48, No 2*. Abstract #271727, Paper No. 45-1.
4. Wilson, J. ^, L.C. Peterson, **K.T. Lawrence**, T.D. Herbert, R. and Caballero-Gill, 2016. Plio-Pleistocene Climate Change: Insights from a New Sea Surface Temperature Record from the Southern Pacific, *North Central GSA Abstracts with Programs 48, No. 5*, Abstract #: 275615; Paper No. 6-6.
5. Gatti, A., M. Wilcha, B. Cohen, and **K.T. Lawrence**, 2016. Greening Lafayette – A Campus-Wide Initiative for Sustainability Through a Connected Communities

- Module, LVAIC Campus Sustainability Conference, Lehigh University, February 20th, 2015.
6. Peterson, L.C., **K.T. Lawrence**, H. Mauriello*, J. Wilson^, L. Holte^, 2015. Plio-Pleistocene Sea Surface Temperature Evolution Across Ocean Basins, Hemispheres and Latitudes. *Eos Transactions AGU 96 (60) Fall Meeting Supplement, Abstract PP21B-2238*.
 7. Herbert, T.D., **K.T. Lawrence**, A.Tzanova, C.S. Kelly, and L.C. Peterson. 2015. Late Miocene Global Cooling Linked to Terrestrial Aridification and Evolutionary Events. *Eos Transactions AGU 96 (60) Fall Meeting Supplement, Abstract PP23E-03*.
 8. Federov, A.V., N. Burls, **K.T. Lawrence**, L.C. Peterson. 2015. Tightly Linked Ocean Meridionality and Zonal Temperature Gradients – a Fundamental Climate Constraint for the Miocene, Pliocene and other Epochs. *Eos Transactions AGU 96 (60) Fall Meeting Supplement, Abstract PP23E-02*.
 9. Tzanova, A., T.D. Herbert, **K.T. Lawrence**, L.C. Peterson, C.S. Kelly. 2015. Detailed View into the Dynamics of the Late Miocene Glaciation Episode that Accompanied Terrestrial Evolution. *Eos Transactions AGU 96 (60) Fall Meeting Supplement, Abstract PP21B-2241*.
 10. Rosell-Mele, A., N. Moraleda, L.C. Peterson, **K.T. Lawrence**. 2015. Fire in the Pliocene. A Record from the Southwest Pacific Ocean. *Eos Transactions AGU 96 (60) Fall Meeting Supplement, Abstract PP23E-08*.
 11. Huska, K.^, L.C. Peterson, **K.T. Lawrence**, H. Miller*, D. Hovey^, R. Caballero-Gill. 2015. Evolution of Pacific Meridional and Zonal Temperature Gradients Over the Plio-Pleistocene, *North Central GSA Abstracts with Programs 47*, No. 5, p.18, Abstract #: 256074; Paper No. 10-31.
 12. Hovey, D.^, L.C. Peterson, **K.T. Lawrence**, H. Miller*. 2015. Spectra Evolution of Sea Surface Temperature Change in The Southwest Pacific from 3 Million Years Ago to the Present, *North Central GSA Abstracts with Programs 47*, No. 5, p.18, Abstract #:256083; Paper No. 10-32.
 13. Gorbey, D.*, **K.T. Lawrence**, S.C. Woodard. 2015. A Proxy Comparison of Pliocene Sea Surface Temperature in the North Atlantic. *Northeast GSA Abstracts with Programs 47*. Abstract 252157, Paper No. 25-2.
 14. **Lawrence, K.T.**, D.M. Sigman, T.D. Herbert, C.A. Riihimaki, C.T. Bolton, A. Martinez-Garcia, A. Rosell-Mele, and G.H. Haug. 2014. **INVITED** - A Synthesis View of Ocean Productivity during the Plio-Pleistocene Transition. *Eos Transactions AGU 95 (59) Fall Meeting Supplement, Abstract PP52B-08*.

15. **Lawrence, K.T.**, Peterson, L.C., DeMenocal, P.B., Bochner, L.*, and Gorbey, D.* 2014. How Consistent are Sea Surface Temperature Estimates from Different Proxies? An Assessment of the Alkenone, Mg/Ca, and Faunal Paleothermometers Using Records from the Plio-Pleistocene. *Eos Transactions AGU 95 (59) Fall Meeting Supplement, Abstract PP33B-1245.*
16. Waite, A.J., Martin, E.E., **Lawrence, K.T.**, Ladlow, C.*, Newkirk, D.R. 2014. "The Closure History of the Central American Seaway and its Relationship to Ocean Circulation and Climate. *Eos Transactions AGU 95 (59) Fall Meeting Supplement, Abstract PP33B-1242.*
17. Ravelo, A.C., Fedorov, A.V., Ford, H.L. and **Lawrence, K.T.** 2014. Warm Pool Temperatures and the Zonal Gradient in the Tropical Pacific during the Early Pliocene Warm Period. *Eos Transactions AGU 95 (59) Fall Meeting Supplement, Abstract PP31E-07.*
18. Woodard, S.C., Rosenthal, Y., Miller, K.G., Wright, J.D., **Lawrence, K.T.**, and Chiu, B.K. 2014. Antarctic Role in Northern Hemisphere Glaciation. *Eos Transactions AGU 95 (59) Fall Meeting Supplement, Abstract PP33B-1224.*
19. **Lawrence, K.T.**, Bochner, L.*, Woodard, S.C., Peterson, L.C., and DeMenocal, P.B. An Assessment of the Consistency of Alkenone, Mg/Ca, and Faunal Sea Surface Temperature Estimates Using Records from the Plio-Pleistocene, ICREA Workshop on Pliocene Climate, Barcelona, Spain, September 17th-19th, 2014.
20. Peterson, L.C., **Lawrence, K.T.**, Caballero, R., Herbert, T.D., Seidenstein, J.*, Miller, H.*, Hovey, D., and Huska, K. Spectral and secular evolution of northern and southern hemisphere climate records from the Pliocene to the present, ICREA Workshop on Pliocene Climate, Barcelona, Spain, September 17th-19th, 2014.
21. Miller, H.*, **K.T. Lawrence**, L.C. Peterson, R.E. Griffiths*, C. Kelly*, J. Seidenstein*. 2014. The Evolution of Ocean Surface Conditions in the Southwest Pacific Over the Plio-Pleistocene Transition. *Northeast GSA Abstracts with Programs 46.* Abstract 235931, Paper No. 41-15.
22. **Lawrence, K.T.**, L.C. Peterson, C.S. Kelly*, H. Miller* and J. Seidenstein*. 2013. Hemispheric Symmetries of Plio-Pleistocene Surface Ocean Conditions: Insights from Southern Hemisphere ODP Sites 1125 and 1088. *Eos Transactions AGU 94 (58) Fall Meeting Supplement, Abstract PP53C-2028.*
23. Herbert, T.D., A. Tzanova, **K.T. Lawrence**, C.S. Kelly*, L.C. Peterson. 2013. Global cooling in the late Miocene – a precursor to northern hemisphere glaciation. *Eos Transactions AGU 94 (58) Fall Meeting Supplement, Abstract PP34A-05.*

24. Brierley, C.M., A.V. Fedorov, and **K.T. Lawrence**. 2013. The Pliocene climate: Fleeting past or a blueprint for the future. *Eos Transactions AGU 94 (58) Fall Meeting Supplement, Abstract GC53C-03*.
25. **Lawrence, K.T.**, A. Fedorov, C. Brierley, P. Dekens, L. Peterson, C. Kelly, Z. Liu, and A.C. Ravelo. 2013. Patterns of Early Pliocene Warmth: Synthesizing Ocean Surface Temperature Records. Second Pliocene Climate Workshop, Bristol University, Bristol, UK September 9th-10th.
26. Brierley, C., A. Fedorov, and **K.T. Lawrence**. 2013. Patterns of Early Pliocene Warmth: Testing Potential Mechanisms. Second Pliocene Climate Workshop, Bristol University, Bristol, UK September 9th-10th.
27. Kelly, C.S.*, **K.T. Lawrence**, and L.C. Peterson. 2013. Exploring Hemispheric and Ocean Basin Symmetry From the Late Miocene to Present Using a Novel South Atlantic Ocean Surface Temperature Record. *Northeast GSA Abstracts with Programs 45. Abstract 215407*.
28. **Lawrence, K.T.**, I. Bailey, T.D. Herbert. 2012. **INVITED** – Inferences about the Plio-Pleistocene History of the Greenland Ice Sheet Based on Paleoceanographic Data from the North Atlantic Ocean. *Eos Transactions AGU 93 (57) Fall Meeting Supplement, Abstract PP11E-02*.
29. L.C. Peterson, **K.T. Lawrence**, C. Kelly*, C.M. Schaupp, J. Seidenstein*. 2012. Hemispheric Symmetry of Mid-Latitude Sea Surface Conditions during Plio-Pleistocene Glaciation: Insights from the Southwest Pacific *Eos Transactions AGU 93 (57) Fall Meeting Supplement, Abstract PP23A-2039*.
30. **Lawrence, K.T.**, L.C. Peterson, C. Kelly*, A. Brannick*, J. Seidenstein*. 2012. An Assessment of Hemispheric Symmetry During the Glaciation of the Northern Hemisphere: Insights from the South Pacific During the Plio-Pleistocene. *Northeast GSA Abstracts with Programs 44. Abstract 200284*.
31. **Lawrence, K.T.**, D.M. Sigman, T.D. Herbert, C.A. Riihimaki, A. Martinez-Garcia, A. Rosell, and G.H. Haug. 2011. Bi-Hemispheric Changes in Westerly Winds Helped Drive Plio-Pleistocene Productivity, *Eos Transactions AGU 92 (56) Fall Meeting Supplement, Abstract PP14B-03*.
32. **Lawrence, K.T.**, L.C. Peterson, A.L. Brannick*, and C.M. Schaupp. 2010. Prelude to the Plio-Pleistocene Glaciations: Southwest Pacific Sea Surface Temperature During the Late Miocene and Pliocene, *Eos Transactions AGU 91 (55) Fall Meeting Supplement, Abstract PP13D-1552*.
33. Herbert, T.D., **K.T. Lawrence**, Z. Liu, and L.C. Peterson. 2010. **INVITED** – Coherent Tropical Ocean Response to Plio-Pleistocene Ice Age Cycles, *Eos Transactions AGU 91 (55) Fall Meeting Supplement, Abstract U42A-01*.

34. **Lawrence, K.T.**, S. Sosdian, Y. Rosenthal and H.E. White*, North Atlantic Climate Evolution Across Plio-Pleistocene Climate Transitions, International Conference on Paleoclimate, Scripps Institution of Oceanography, San Diego, CA, August 29th-September 3rd, 2010.
35. Sosdian, S., **K.T. Lawrence**, H.E. White*, and Y. Rosenthal, 2010. North Atlantic Climate Evolution Across Plio-Pleistocene Climate Transitions, Workshop on Palaeo-CO₂, Bristol University, Bristol, UK July 7th-8th.
36. Bolton, C.T., **K.T. Lawrence**, S.J. Gibbs, and P.A. Wilson. 2010. High- and Low-Latitude Calcareous Nannoplankton Responses to an Abrupt Change in Surface Ocean Conditions During the Late Pliocene, International Palaeontological Congress, London, England, June 28th to July 3rd.
37. Bochner, L.* and **K.T. Lawrence**. 2010. A Comparison of Methods for Estimating Past Ocean Temperatures: Results from the Eastern Equatorial Atlantic Over the Late Pleistocene, 24th National Conference on Undergraduate Research Conference Proceedings, April 15-17th, The University of Montana, Missoula, Montana.
38. Bochner, L.* and **K.T. Lawrence**. 2010. Inter-Proxy Assessment of Paleothermometers: Results from the late Pleistocene Eastern Equatorial Atlantic, *Northeast GSA Abstracts with Programs 42. Abstract 168960*.
39. White, H.E.* , **K.T. Lawrence**, S. Sosdian, and Y. Rosenthal. 2010. A Multi-Proxy Approach to Understanding the Plio-Pleistocene Climate Evolution of the North Atlantic Ocean, *Northeast GSA Abstracts with Programs 42. Abstract 168915*.
40. **Lawrence, K.T.**, S. Sosdian, Y. Rosenthal, and H.E. White*. 2009. Regional Versus Global Influences on North Atlantic Climate Across Plio-Pleistocene Climate Transitions: A Multi-Proxy Based Approach, *Eos Transactions AGU 90 (54) Fall Meeting Supplement, Abstract PP33A-06*.
41. Bolton, C.T., **K.T. Lawrence**, S.J. Gibbs, P.A. Wilson, L.C. Cleaveland, and T.D. Herbert. 2009. Productivity of the (inter)glacial Pliocene Eastern Equatorial Pacific and Atlantic Oceans, Workshop on Pliocene Climate, October 23rd-25th, Bordeaux, France, Programme and Abstracts, Abstract 9.
42. Pohlman, E.E., **K.T. Lawrence**, and T.D. Herbert. 2009. Temperature and Productivity Records From the Late Miocene North Atlantic, *Northeast GSA Abstracts with Programs 41. Abstract 155330*.
43. White, H.E.* , **K.T. Lawrence**, T.D. Herbert, L.C. Cleaveland, E. Pohlman, and J. Morabito*. 2009. Sea Surface Temperature and Productivity Records from a

- Latitudinal Transect of North Atlantic Sites during the Plio-Pleistocene Transition, *Northeast GSA Abstracts with Programs 41. Abstract 155022.*
44. Bochner, L. *, **K.T. Lawrence**, L.C. Cleaveland, and T.D. Herbert. 2009. Changing Zonal and Latitudinal Sea Surface Temperature Gradients Through the Intensification of Northern Hemisphere Glaciation, *Northeast GSA Abstracts with Programs 41. Abstract 155107.*
 45. **Lawrence, K.T.**, T.D. Herbert, L.C. Cleaveland, and Z. Liu. 2009. Shifting Ocean Productivity Patterns During the Intensification of Northern Hemisphere Glaciation, *Northeast GSA Abstracts with Programs 41. Abstract 155870.*
 46. Pearson, A. and **K.T. Lawrence**, 2009, Organic Geochemistry for Paleoclimate, *Northeast GSA Abstracts with Programs 41. Abstract 155797.*
 47. **Lawrence, K.T.**, H.E. White*, T.D. Herbert, E. Pohlman, L.C. Cleaveland, and J. Morabito*. 2008. Changing Ocean Surface Conditions in the Late Pliocene North Atlantic: Insights From a Latitudinal Transect, *Eos Transactions AGU 89 (53) Fall Meeting Supplement, Abstract PP33C-1591.*
 48. **Lawrence, K.T.** and L.L. Malinconico. 2008. Geology in the Movies: Using Hollywood Films as a Teaching Tool in Introductory Geosciences Courses, *Eos Transactions AGU 89 (53) Fall Meeting Supplement, Abstract ED31A-0603.*
 49. Pohlman, E.E., **K.T. Lawrence**, J. Morabito*, B. Harper, and T.D. Herbert. 2008. Extreme Warmth in the Late Miocene North Atlantic, *Eos Transactions AGU 89 (53) Fall Meeting Supplement, Abstract PP33C-1590.*
 50. Cleaveland, L.C., **K.T. Lawrence**, and T.D. Herbert. 2008. Milankovitch-Band Evolution of Tropical Sea Surface Temperatures Over the Plio-Pleistocene, *Eos Transactions AGU 89 (53) Fall Meeting Supplement, Abstract PP33C-1592.*
 51. **Lawrence, K.T.**, L.C. Cleaveland, A.B. Mulligan%, and T.D. Herbert. 2007. **INVITED** - Zonal and Meridional Sea Surface Temperature Gradients and Orbital Variability During the Plio-Pleistocene Transition, *Eos, Transactions, American Geophysical Union, 88 (52), Fall Meeting Supplement, Abstract PP51E-02.*
 52. Herbert, T.D., L.C. Cleaveland, Z. Liu, and **K.T. Lawrence**. 2007. Synchronization of Glacial-Interglacial SST changes in the Tropical Oceans: Evidence for Amplification of Climate Sensitivity by Carbon Dioxide Over the Past 2.7 Ma, *Eos, Transactions, American Geophysical Union, 88 (52), Fall Meeting Supplement, Abstract U51B-07.*
 53. **Lawrence, K.T.**, T.D. Herbert, and Z. Liu. 2006. **INVITED** - Evolution of the Eastern Tropical Pacific Through Plio-Pleistocene Glaciation, *Eos, Transactions,*

- American Geophysical Union, 87 (52), Fall Meeting Supplement, Abstract PP12A-02.*
54. **Lawrence, K.T.**, T.D. Herbert, C.M. Brown[°], M.E. Raymo, and A.M. Haywood. 2006. North Atlantic Sea Surface Conditions During the Plio-Pleistocene Transition: High Variability, Dramatic Cooling, and Crashing Productivity, *Eos, Transactions, American Geophysical Union, 87 (52), Fall Meeting Supplement, Abstract PP31A-1721.*
 55. Cassie, B.E., J. Brigham-Grette, **K.T. Lawrence**, and M.S. Cook. 2006. Rising Temperatures, Shrinking Ice: The Deglaciation in the Bering Sea Based on Diatoms, Alkenones, and Oxygen Isotopes, *Institute of Arctic and Alpine Research (INSTAAR) 36th International Arctic Workshop, Programs and Abstracts, p.44-46.*
 56. Robinson, M.M., H.J. Dowsett, G.S. Dwyer, and **K.T. Lawrence**. 2006. Mid-Pliocene Sea Surface Temperature Estimation Using Multiple Proxies, *Eos, Transactions, American Geophysical Union, 87 (52), Fall Meeting Supplement, Abstract PP12A-02.*
 57. **Lawrence, K.T.**, L.C. Cleaveland, A.B. Mulligan[°], and T.D. Herbert. 2005. Plio-Pleistocene Ocean Productivity: A Story of Interbasin Symmetry, *Eos, Transactions, American Geophysical Union, 86 (52), Fall Meeting Supplement, Abstract PP34B-06.*
 58. **Lawrence, K.T.**, Z. Liu, L.C. Cleaveland, T.D. Herbert, and M.E. Raymo. 2005. A Spatial Perspective on Plio-Pleistocene Ocean Cooling, *GSA Earth System Processes 2, Conference Volume, Abstract 50-4.*
 59. **Lawrence, K.T.**, Z. Liu, T.D. Herbert, and M.E. Raymo. 2005. High and Low Latitude Linkages During the Plio-Pleistocene Transition, *Northeast GSA Abstracts with Programs 37 (1). Abstract 82159.*
 60. **Lawrence K.T.**, Z. Liu, and T.D. Herbert. 2004. High Latitude and Tropical Climates Linked Prior to the Onset of Northern Hemisphere Glaciation: Evidence From the Eastern Tropical Pacific, *Eos, Transactions, American Geophysical Union, 85 (47), Fall Meeting Supplement, Abstract PP23A-1397.*
 61. **Lawrence, K.T.**, Z. Liu, and T.D. Herbert. 2003. A Tropical Climate Puzzle: Plio-Pleistocene Obliquity-Dominated Temperature and Productivity Records From the Eastern Equatorial Pacific, *Eos, Transactions, American Geophysical Union, 84 (46), Fall Meeting Supplement, Abstract U12B-04.*
 62. **Lawrence, K.T.** and T.D. Herbert. 2003. Evolution of Eastern Equatorial Pacific Sea Surface Temperatures During The Pliocene Climate Transition, *GSA Abstracts with Programs Volume 35 (6).*

63. **Lawrence, K.T.**, L.C. Sloan, and J.O. Sewall. 2001. Eocene Terrestrial Climatic Response to Precessional Orbital Forcing: Implications for Interpretation of the Geological Record, *Climate and Biota of the Early Paleogene Abstract Volume 1*: 56.
64. **Lawrence, K.T.**, L.C. Sloan, and J.O. Sewall. 2000. Terrestrial Climatic Response to Topographic and Orbital Forcing in the Eocene. *Eos, Transactions, American Geophysical Union, 81 (48), Fall Meeting Supplement, Abstract OS11C-03*.

INVITED TALKS

1. Columbia University, Lamont-Doherty Earth Observatory, Biology and Paleoenvironment Division, Palisades, NY (May, 2015).
2. Columbia University, Lamont-Doherty Earth Observatory, Pliocene Workshop, Palisades, NY (February, 2015).
3. Brown University, Department of Geological Sciences, Earth Systems History Group, Providence, RI (March, 2014)
4. University of Massachusetts, Geosciences Department, Amherst, MA (January, 2014)
5. Macalester College, Department of Geology, St. Paul, Minnesota (November, 2013)
6. Lehigh University, Department of Earth and Environmental Sciences, Bethlehem, PA (October, 2013).
7. Millersville University, Department of Earth Sciences, Millersville, PA (January, 2013)
8. Lafayette College, Thomas Roy and Lura Forrest Jones Lecture, Easton, PA (November, 2012).
9. Lafayette College, ARC Works-in-Progress Seminar Series, Easton, PA (March, 2012).
10. Dickinson College, Department of Earth Sciences, Carlisle, PA (February 2012).
11. Columbia University, Lamont-Doherty Earth Observatory, Biology and Paleoenvironment Division, Palisades, NY (May 2011).
12. Lafayette College, Department of Biology, Bioconnections Seminar Series, Easton, PA (April 2011).

13. Drew University, Environmental Studies and Sustainability Program, Madison, NJ (February 2011).
14. Kutztown University, Department of Physical Sciences, Interdisciplinary Seminar Series, Kutztown, PA (September 2010).
15. Rutgers University, Institute of Marine and Coastal Sciences, New Brunswick, NJ (April 2010).
16. University of California Santa Cruz, Department of Ocean Sciences, Geochemistry Group, Santa Cruz, CA (March 2010).
17. University of California Santa Cruz, Department of Ocean Sciences, Paleoclimatology Group, Santa Cruz, CA (February 2010).
18. San Francisco State University, Department of Geosciences, San Francisco, CA (February 2010).
19. Smith College, Department of Geosciences, Northampton, MA (October 2009).
20. Bucknell University, Geology Department, Lewisburg, PA (April 2009).
21. University of Massachusetts, Department of Geosciences, Amherst, MA (November 2008).
22. United States Geological Survey, Mid-Pliocene Seminar Series, Reston, VA (May 2008).
23. Skidmore College, Geosciences Department, Saratoga Springs, NY (February 2008).
24. Scripps Institute of Oceanography, Geology Department, La Jolla, California (December 2007).
25. Lafayette College, Department of Biology, Bioconnections Seminar Series, Easton, PA (September 2007).
26. Rutgers University, Institute of Marine and Coastal Sciences, Geochemistry Group, New Brunswick, NJ (May 2007).
27. University of Massachusetts, Geosciences Department, Global Change Group, Amherst, MA (June 2006).
28. Boston University, Department of Earth Sciences, Climate and Earth History Group, Boston, MA (November 2005).

29. Princeton University, Geophysical Fluid Dynamics Laboratory, The Pliocene Paradox Meeting, Forrestal Campus, Princeton, NJ (October 2004).

OTHER PRESENTATIONS

- **Lawrence, K.T.** July 2008. “Student Critiques of *An Inconvenient Truth* and *The Day After Tomorrow*” - On the Cutting Edge Workshop – Professional Development for Geoscience Faculty. “Teaching Introductory Geoscience Courses in the 21st Century” Carleton and St. Olaf Colleges, Northfield, Minnesota.
- **Lawrence, K.T.** 1998. *The Warming of the Earth – A Beginner’s Guide to Understanding the Issue of Global Warming.*
http://www.whrc.org/resources/primer_home.html (note that this guide has since been updated and modified by others).

SERVICE

Elected or Appointed College Service

- Department Head, Lafayette College, Department of Geology and Environmental Geosciences (2015–present)
- Member, Lafayette College, Governance Committee (2015–present)
- Co-Chair, Lafayette College, Environmental Science and Studies Program (2014–present)
- Member, Lafayette College, Promotion and Tenure Review Committee, Hearing Review Subcommittee (2014–2015)
- Member, Lafayette College, Promotion and Tenure Review Committee (2014–2015)
- Member, Lafayette College, Assistant Professor of Environmental Studies Search Committee (2014–2015)
- Member, Lafayette College, Provost Search Committee (2014)
- Acting Department Head, Lafayette College, Department of Geology and Environmental Geosciences (Fall 2012).
- Member, Lafayette College Visiting Assistant Professor in the Department of Geology and Environmental Geosciences Search Committee (Spring 2011)
- Member, Lafayette College Curriculum and Education Policy CCS Implementation Subcommittee (2011-2012)
- Member, Lafayette College Faculty Academic Policy Committee (2011–2014)
- Member, Lafayette College Curriculum and Education Policy Committee C-committee (2010–2011)
- Member, Lafayette College Visiting Assistant Professor in the Department of Geology and Environmental Geosciences Search Committee (Spring 2009)
- Member, Lafayette College Curriculum and Education Policy Committee (2008–2011)
- Member, Lafayette College Associate Provost for Faculty Development and Research Services Search Committee (2008)
- Member, Lafayette College Faculty Committee on Athletics (2007–2008)

Other College Service

- Originator and Steering Committee Member, Lafayette College, STEM Mentoring Program (2015–present)
- Originator and Steering Committee Member, Lafayette College, Athletics Department Respect Initiative (2014–present)
- Member, LaFarm Advisory Committee (2014–present)
- Member, Lafayette Sustainability Committee (2014–present)
- Member, Lafayette College Earth Science Community Outreach Program, Easton Area Elementary Schools (2011–2014)
- Member, Lafayette College Ethics Advisory Committee (2008–2010)
- Volunteer, Lafayette College Green Move Out Team (2007–present)
- Graduate School Advisor, Lafayette College Geology Department (2006–present)
- Member, Lafayette College McKelvy Scholars Selection Committee (2008, 2009, 2011)

Professional Service

- Referee for Scholarly Journals/ Book Publishers (ongoing):
 - Science
 - Nature
 - Nature Geoscience
 - Proceedings of the National Academy of Sciences
 - Geology
 - Earth and Planetary Sciences Letters
 - Paleoceanography
 - Global and Planetary Change
 - Deep Sea Research
 - Marine Micropaleontology
 - Marine Geology
 - Quaternary Science Reviews
 - Journal of Quaternary Science
 - The Micropalaeontological Society
- Referee for Funding Agencies (ongoing):
 - The National Science Foundation (ad hoc and panel reviewer)
 - National Environmental Research Council (primary UK funding agency in the Geosciences)
 - Research Corporation for Science Advancement
 - American Chemical Society Petroleum Research Fund
- Co-Chair, American Geophysical Union Session “Demystifying the Miocene-Pliocene: Exploring the couplings and evolution of climatic, biologic, biogeochemical and oceanic systems,” AGU Fall Meeting 2015, San Francisco, CA.

- Discussion Leader, ICREA Workshop on Pliocene Climate, Barcelona, Spain, September 17th-19th, 2014.
- Co-Chair, Geological Society of America Northeast Section Symposium “Interpreting Sedimentary Records of Past Changes in Climate and Ecology,” NEGSA Meeting 2014, Lancaster, PA.
- Co-Chair, American Geophysical Union Session “North Atlantic Climate during the Pliocene and Quaternary,” AGU Fall Meeting 2013, San Francisco, CA.
- Co-Chair, American Geophysical Union Session “The Early Pliocene Warm Period as an Analog for Future Warmth,” AGU Fall Meeting 2010, San Francisco, CA.
- Co-Chair, Geological Society of America Northeast Section Symposium “Climatic Change: Perspectives and Insights from Hothouse and Icehouse Climates in Deep Time,” NEGSA Meeting 2009, Portland, ME.
- Co-Chair, American Geophysical Union Session “The Pliocene Warm Interval: A Test Bed for Future Warming,” AGU Fall Meeting 2007, San Francisco, CA.

PROFESSIONAL MEMBERSHIPS

- Geological Society of America (2001–present)
- American Geophysical Union (1999–present)
- Sigma Xi Scientific Research Society (1996–present)