

Academic Background

- 2008 – 2012 Doctor of Philosophy
 University of California, Santa Barbara
 Department of Ecology, Evolution, & Marine Biology
- 2005 – 2007 Master of Arts
 Brown University, RI joint program with Marine Biological Laboratory, MA
 Department of Ecology & Evolutionary Biology
- 2000 – 2004 Bachelors of Arts with High Honors in Biology, minor in Sociology/Anthropology
 Swarthmore College, PA

Professional Experience

- 2015 – Present Assistant professor, Hampshire College
 School of Natural Science
- 2013 – 2015 NOAA Climate & Global Change Postdoctoral Fellow
 University of California, Irvine
 Department of Ecology & Evolutionary Biology
- 2008 – 2012 DOE Global Change Program Graduate Fellow
 University of California, Santa Barbara
 Department of Ecology, Evolution, & Marine Biology
- 2004 – 2005 Post-baccalaureate Intramural Research Training Award
 National Institutes of Health

Publications

- 2016 Kramer, D., K. Stevens, N.E. Williams, **S. Sistla**, A. Roddy, G. Urquhart. Coastal livelihood transitions and their trans-ecosystem implications in a region undergoing rapid globalization. Submitted.
- Crowther, T., et al. Quantifying global soil carbon losses in response to warming. In press: *Nature*.
- Sistla, S.**, A. Roddy, N. E. Williams, D. Kramer, K. Stevens, S. Allison. Agroforestry practices promote biodiversity and natural resource diversity in Atlantic Nicaragua. *PLoS ONE* 11(9): e0162529.
- X. Wang, **S. Sistla**, X. Wang, X. Lü, X. Han. Carbon and nitrogen contents in particle-size fractions of topsoil along a 3000 km aridity gradient in northern China. *Biogeosciences* 13: 3635–3646.
- Spasojevic, M., C. Bahlai, B. Bradley, B. Butterfield, M.N. Tuanmu, **S. Sistla**, R. Wiederholt, K. Suding. Scaling up the diversity–resilience relationship with trait databases and remote sensing data: the recovery of productivity after wildfire. *Global Change Biology* 22: 1421–1432. doi:10.1111/gcb.13174

- 2015 **Sistla, S.**, A. Appling, A. Lewandowska, B. Taylor, A. Wolf. Stoichiometric Flexibility in Response to Fertilization along Gradients of Environmental and Organismal Nutrient Richness. *Oikos* doi: 10.1111/oik.02385.
- 2014 Han, X., **S. Sistla**, X. Lü, Y. Zhang, X.G. Han. Hierarchical responses of plant stoichiometry to nitrogen deposition and mowing in a temperate steppe. *Plant and Soil* 382: 175 – 187.
- Sistla, S.**, E. Rastetter, J. Schimel. Responses of a tundra system to warming using SCAMPS: A stoichiometrically coupled, acclimating microbe-plant-soil model. *Ecological Monographs* 84 (1): 151 – 170.
- 2013 **Sistla, S.** and J. Schimel. Seasonal patterns of microbial extracellular enzyme activities in an arctic tundra soil: Identifying direct and indirect effects of long-term summer warming. *Soil Biology & Biochemistry* 66: 119 – 129.
- Sistla, S.**, J. Moore, R. Simpson, L. Gough, G. Shaver, J. Schimel. Long-term warming restructures arctic tundra without changing net soil carbon storage. *Nature* 497 (7451): 615 – 18.
- Recommended for *Faculty of 1000*. Featured in: *Scientific American online*, *Sciencenews.org*, *Anchorage Daily News*, *Redorbit.com*, *The International Polar Foundation*, *Science360*, and other publications.
- 2012 **Sistla, S.** and J. Schimel. Stoichiometric flexibility as a regulator of carbon and nutrient cycling in terrestrial ecosystems under change. *New Phytologist* 96 (1): 68 – 78.
- Sistla, S.**, S. Asao, J.P. Schimel. Microbial N-limitation in tundra soil and its detection: Implications for Arctic SOC cycling. *Soil Biology & Biochemistry* 55: 78 – 84.
- Gutiérrez, N., S. Valencia, T. Branch, D. Agnew, A. Stern-Pirlot, A. Smith, C. Nannes, R. Selden, J. Thorson, T. Essington, C. Costello, D. Hoggarth, P. Bianchi, **S. Sistla**, J. Cornejo, A. Larsen, S. Teck, O. Defeo, K. Sainsbury, R. Hilborn, K. Baum, N. Williams. Eco-labels: A reliable indicator of stock status for seafood consumers. *PLoS ONE* 7(8): e43765.
- 2010 Viola, D., E. Mordecai, A. Jaramillo, **S. Sistla**, L. Albertson, J. Gosnell, B. Cardinale, J. Levine. Competition-defense tradeoffs and the maintenance of plant diversity. *Proceedings of the National Academy of Sciences* 107 (40): 17217 – 17222.
- 2005 Cebra-Thomas J., F. Tan, **S. Sistla**, E. Estes, G. Bender, C. Kim, P. Riccio, S. Gilbert. How the turtle forms its shell: A paracrine hypothesis of carapace formation. *J. Experimental Zoology B*: 558 – 569.

Book Chapters and other publications

- 2017 **Sistla, S.** Exploring the Cost of Scientific Curiosity. In: *Curiosity in Multidisciplinary Perspective*, edited by: Zurn, Perry and Arjun Shankar (invited).
- 2014 von Wettberg, E., J. Ray-Mukherjee, N. D'Adesky, D. Nesbeth, **S. Sistla**. The Evolutionary Ecology and Genetics of Stress Resistance Syndrome (SRS) Traits: Revisiting Chapin, Autumn and Pugnaire (1993). In: *Plant Ecology and Evolution in Harsh Environments*, edited by: Rajakaruna, N., R. Boyd, T. Harris, NOVA Publishers.

- 2013 **Sistla, S.** *Understanding the importance of terrestrial responses to climate change: an Arctic tundra case study.* Mundus Maris (invited). Available at: <http://work.mundusmaris.org/index.php/en/publications/scientific/892-tundra>
- 2003 Cho, M., M. Cohen, **S. Sistla.** *What is a "Normal" Phenotype?* DevBio: A Companion to Developmental Biology. Sinauer Associates. Edited by Scott F. Gilbert and Emily Zacki.

Grants

2016 - 2019 DOE Systems Biology Grant. The "Who" and "How" of Microbial Control over Soil Carbon Dynamics: a Multi-omics, Stable Isotope, and Modeling Approach. Co-Investigator (PI Kristen DeAngelis, UMASS Amherst, Co-Investigators: Erin Conlon, UMASS Amherst, Serita Frey and Stuart Grandy, University of New Hampshire). \$1,887,107

Lucy B. Stokes Foundation. \$5,280

Dr. Lucy Innovation in Education Course Development and Faculty Research Grants. Hampshire College. \$12,000

Hampshire College Faculty Development Grant. \$2000.

2013 UCSB *ScienceLine* Life Sciences award. 2013.

2012 NSF Doctoral Dissertation Improvement Grant. \$15,000

2011 Integrated Network for Terrestrial Ecosystem Research on Feedbacks to the Atmosphere and Climate grant to support collaborative exchange. \$800

Worster Grant, undergraduate research mentorship award. \$3,000

Luce Environmental Science to Solutions Fellowship. \$6,000

2008 Leal Anne Kerry Mertes Grant. UC Santa Barbara research grant. \$3,000

Explorer's Club Exploration Fund research grant. \$3,500

Fellowships

2013 – 2015 NOAA Climate & Global Change Postdoctoral Fellowship. \$120,000

2008 – 2012 DOE Global Change Program Graduate Fellowship. \$105,000

2004 NSF Research Experience for Undergraduates. \$3,000

2003 Howard Hughes Medical Institute research fellowship, Swarthmore College. \$3,000

Travel grants

2014 Natural Capital Project Annual Meeting and Training. Stanford University.

- 2013 Dissertations Initiative for the Advancement of Climate Change Research VIII Symposium. (Declined due to schedule conflict).
- 2011 27th New Phytologist Symposium: *Stoichiometric flexibility in terrestrial ecosystems under global change*. Biosphere 2, AZ.
- Enzymes in the Environment: Ecology, Activity, and Applications International Conference*. Young Scientist Award. Bad Nauheim, Germany.
- INTERFACE meeting: *How Do We Improve Earth System Models: Integrating Earth System Models, Ecosystem Models, Experiments and Long-Term Data?* Captiva, FL.
- 2009 Graduate Student Association pre-doctoral travel grant, UC Santa Barbara.

Working Groups

- 2017 *Understanding the role of climatic and biological factors in regulating stoichiometric responses of organisms and ecosystems to nutrient enrichment*. Hanse-Wissenschaftskolleg Institute for Advanced Study. Delmenhorst, Germany. Invited participant.
- 2014 - 2017 *Playing dominoes with tipping points? Exploring the linkages between anthropogenically-driven shifts in marine and terrestrial biodiversity and ecosystem services in a rapidly globalizing coastal region within a biodiversity hotspot*. National Socio-Environmental Synthesis Center, the Helmholtz Centre for Environmental Research, and the Synthesis Centre within the German Centre for Integrative Biodiversity Research Halle-Jena-Leipzig (Co-PI with Daniel Kramer, MSU).
- Press coverage:** *Thinking across disciplines to drive science and policy*.
http://www.huffingtonpost.com/antonia-sohns/thinking-across-disciplin_b_7423628.html
- 2014 *Woodstoich III: A Workshop to Advance Integration Across Biology*. Sydney, Australia.
- 2013 *Scaling Up: Population and Community Ecology Workshop for Early Career Scientists*. ESA working group. Invited participant.

Teaching

- 2016 *Ecosystem Ecology: A Biogeochemical Perspective*. Hampshire College.
Environmental Conflict in the Anthropocene. Hampshire College.
- 2015 *Innovations for Change: Problem Solving for the Future*. Hampshire College. Team taught.
Integrated Sciences: Where does the Water Go? Water, Carbon, and Nutrient Flow in a Living Building. Hampshire College. Team taught.
- 2012 *Ecosystem Processes*. Instructor, UC Santa Barbara.
- 2009 – 2010 *Understanding a Changing World – From Molecules to Ecosystems*. Instructor, UC Santa Barbara. School for Scientific Thought program for high school students supported by NSF.
- 2006 – 2007 Sheridan Center Teaching Certificate I. Brown University.

Pedagogical development

2017 Quantitative Undergraduate Biology Education and Synthesis. Faculty network participant.

Students advised

2016 – Present Grace Pold, UMASS Amherst (PhD committee member).

2015 – 2016 Chiara Forrester, Hampshire College (thesis Chair, now PhD student at UC Boulder).

Invited Talks

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- 2016 **Sistla, S.** Exploring the Cost of Scientific Curiosity. *Curiosity in Multidisciplinary Perspective Symposium* at the University of Pennsylvania.
- 2015 **Sistla, S.** *Ecological feedbacks to global change: A terrestrial ecosystems perspective.* UMASS Amherst.
- Sistla, S.** *New frontiers in soils: Future challenges and knowledge gaps.* Ecological Society of America.
- 2013 **Sistla, S.** *Arctic permafrost and carbon cycling: Implications for future carbon budget and climate scenarios.* Arctic Futures Symposium: Research to inform policymaking session. Hosted by the International Polar Foundation. Brussels, Belgium.
- Sistla, S.** *The scientific context of climate change: Deconstructing arguments denying the anthropocene.* Soka University of America. Aliso Viejo, CA.
- Sistla, S.** *Understanding the effects of warming on Arctic systems.* St. Olaf College. Northfield, MN.
- 2012 **Sistla, S., E.B. Rastetter, J.P. Schimel.** *Exploring the effects of long-term warming on tundra plant-soil feedbacks through changes in community structure and extracellular enzyme activity using a modeling approach.* Enzymes in the Environment: Incorporating Enzyme Activities Into Biogeochemical Models. Colorado State University. Fort Collins, CO.
- Sistla, S.** *Global climate change: Coupling people and the planet.* UCSB Adventure Programs staff lectures. University of California, Santa Barbara.
- 2007 **Sistla, S.** *Climate change and its implication for Alaskan native cultures.* Haffenreffer Museum of Anthropology. Bristol, RI.
- 2006 **Sistla, S.** *Linking aboveground and belowground responses to chronic soil warming: Characterizing the determinants of the net C balance of a temperate forest in a warming world.* University of Rhode Island, Department of Natural Resources Science. Kingston, RI.
- Sistla, S.** *RI and Climate Change.* RI Chapter of the Sierra Club Member's Night. Brown University, Ladd Observatory. Providence, RI.

Service

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- Ethics and Common Good committee member. Hampshire College.
 - Consulting Editor: *Plant and Soil*.

- Reviewer: *Biogeochemistry, Biogeosciences, Climate Change Responses, Ecology, Ecosystems, FEMS Microbiology Ecology, Global Change Biology, Molecular Ecology, Journal of Geophysical Research: Biogeosciences, Nature Geoscience, New Phytologist, Oecologia, Plant and Soil, Soil Biology and Biochemistry, NSF Geobiology and Low-Temperature Geochemistry Program, NSF Office of Polar Programs, NSF Division of Environmental Biology.*
- Volunteer for the Climate Literacy and Energy Awareness Network (CLEAN). Work as a reviewer to help build collection of resources and tools to enable an online community to share and discuss teaching about climate and energy science.
- Volunteer for *ScienceLine*. Answer science questions from K-12 students.
- Sierra Club, RI Chapter. Executive Committee, National Delegate.
- Participant in: Integrated Network for Terrestrial Ecosystem Research on Feedbacks to the Atmosphere and Climate Network, Research Coordination Network: Enzymes in the Environment, NSF Arctic System Science Program's Changing Seasonality Initiative.