# Rose Abramoff

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# Current position

Postdoctoral Researcher, Laboratoire des Sciences du Climat et de l'Environnement

# Areas of specialization

Biogeochemistry • Terrestrial Biosphere Modeling

# Appointments held

2018-	Postdoctoral Researcher, LSCE
2015-2018	Postdoctoral Researcher, LBNL
2009-2015	Teaching Fellow, Boston University

### Education

2015	PhD in Biology: Ecology, Behavior and Evolution, Boston University
2015	CERTIFICATE in Biogeochemistry, Boston University
2009	BA in Biology, Amherst College
2009	BA in Theater and Dance, Amherst College

### Publications & talks

## Published articles

2019

2018

2018

2018

Abramoff RZ, Torn MS, Georgiou K, Tang J, Riley WJ, Soil organic matter temperature sensitiv-
ity cannot be directly inferred from spatial gradients. Global Biogeochemical Cycles 33:6, 761-776,
DOI:10.1029/2018GB006001

Contributing author to: 2nd State of the Carbon Cycle Report. Chapter 12: Soils

Sulman BN, Moore JAM, **Abramoff RZ**, Averill C, Kivlin S, Georgiou K, Sridhar B, Hartman M, Wang G, Wieder WR, Bradford MA, Luo Y, Mayes MA, Morrison E, Riley WJ, Salazar A, Schimel JP, Tang J, Classen AT, Multiple models and experiments underscore large uncertainty in soil carbon dynamics. *Biogeochemistry* 141:2, 109-123, DOI:10.1007/s10533-018-0509-z

Savage K, Davidson EA, **Abramoff RZ**, Finzi AC, Giasson M-A, Partitioning Soil Respiration: Quantifying the Artifacts of the Trenching Method. *Biogeochemistry* 1-11. DOI:10.1007/s10533-018-0472-8

Abramoff RZ, Xu X, Hartmann M, O'Brien S, Feng W, Davidson EA, Finzi AC, Moorhead D,

- Schimel J, Torn MS, Mayes M (2018), The Millennial model: in search of measurable pools and exchanges in soil carbon cycling for the new century. *Biogeochemistry* 1-21, DOI:10.1007/s10533-017-0409-7
- Georgiou K, **Abramoff RZ**, Harte J, Riley WJ, Torn MS (2017), Microbial community-level regulation explains soil carbon responses to long-term litter manipulations. *Nature Communications* 1223, 1-10, DOI: 10.1038/s41467-017-01116-z
- Abramoff RZ, Davidson EA, Finzi AC (2017), A parsimonious modular approach to building a mechanistic belowground carbon and nitrogen model. *JGR Biogeosciences* 122, DOI:10.1002/2017JG003796
- Abramoff RZ, Finzi AC (2016), Seasonality and partitioning of root allocation to rhizosphere soils in a midlatitude forest. *Ecosphere* 7.11, e01547, DOI:10.1002/ecs2.1547
- Finzi AC, **Abramoff RZ**, Darby BA, Spiller KS, Brzostek ER, Phillips RP (2015), Rhizosphere processes are quantitatively important components of terrestrial carbon and nutrient cycles. *Global Change Biology* 21.5, 2082-2094, DOI: 10.1111/gcb.12816
- Abramoff RZ, Finzi AC (2015), Are above-and below-ground phenology in sync? *New Phytologist* 205.3, 1054-1061, DOI: 10.1111/nph.13111

#### **DATASETS**

- Vaughn L, Zhu B, Bimueller C, Porras R, Curtis B, Chafe O, **Abramoff RZ**, Bill M, Torn MS, Soil Mesocosm CO<sub>2</sub> Emissions after 1<sub>3</sub>C-glucose Addition, Soil Physical and Chemical Characteristics, and Microbial Biomass, Barrow, Alaska, 2014-2016. *Next Generation Ecosystems Experiment-Arctic, Oak Ridge National Laboratory (ORNL), Oak Ridge, TN (US)* DOI: 10.5440/1364061
- Abramoff RZ, Finzi AC (2016), Phenology and Carbon Allocation of Roots at Harvard Forest 2011-2013. Long Term Ecological Research Network, Dataset. DOI:10.6073/pasta/b2fe6d68f23ad815f62a022826028328

#### SELECTED INVITED PRESENTATIONS

- Abramoff RZ, Torn MS, Georgiou K, Tang J, Riley WJ, A tale of four models, or Spatial gradients can hide the temperature sensitivity of soil organic matter to warming. *Enviro-Lunch Seminar, UC Merced*
- Abramoff RZ, Georgiou K, Tang J, Torn MS, Riley WJ, Mineral surface properties and mean annual temperature control soil carbon stock. *Department of Geography, ETH Zurich*
- Abramoff RZ, Harden J, Georgiou K (presenting author), Tang J, Torn MS, Riley WJ, Managing for C sequestration: a modeling framework for decision-making. European Geophysical Union Annual Meeting, Vienna, Austria
- Mayes MA, Wang G, **Abramoff RZ**, Xu X, Hartman MD, Feng W, Davidson EA, Finzi AC, Moorhead D, Schimel J, O'Brien SL, Thornton PE, Measurable Pools of Soil Carbon for Carbon Cycle Modeling. *American Geophysical Union Fall Meeting*
- Sulman B, Moore J, Averill C, **Abramoff RZ**, Bradford M, Classen AT, Hartman MD, Kivlin SN, Luo Y, Mayes MA, Morrison EW, Riley WJ, Salazar A, Schimel J, Sridhar B, Tang J, Wang G, Wieder WR, Key Process Uncertainties in Soil Carbon Dynamics: Comparing Multiple Model Structures and Observational Meta-analysis. *American Geophysical Union Fall Meeting*
- Abramoff RZ, Georgiou K, Tang J, Torn MS, Riley WJ, Climate warming and soil carbon cycling: Emergent responses across time and space. *Ecological Society of America Annual Meeting*

## Grants, honors & awards

- 2018 Marie Curie Individual Fellowship
- MOPGA Laureate
- LBNL EESA Early Career Development Grant
- BU Biogeoscience Symposium Outstanding Oral Presentation Award

2014 AAUW Dissertation Fellowship

AGU Outstanding Student Paper Award
AGU Student Travel Grant Award
BU George R. Bernard, Jr. Travel Award

2011-2014 BU GRS Graduate Scholarship

NSF Graduate STEM in K-12 Education Fellowship

BU Teaching Fellowship

NSF East Asia and Pacific Summer Institutes Fellowship

2009-2011 Amherst College Fellowship for Graduate Study

BU Dean's Fellowship

2007 Howard Hughes Medical Institute Independent Research Fellowship

## Teaching & Mentorship

Pomona College undergraduate thesis advisor: Johanna Recalde

2012,2013 Harvard Forest REU Program Mentor: Samuel Knapp, Arline Gould, Johanna Recalde

2011-2015 Undergraduate Research Intern Mentor: Amanda Alon, Aubree Woods

NSF GK-12 GLACIER Teaching Fellow: Curley K-8 School

2010-2015 BU Teaching Fellow: Biology I, Biology II, Ecology

## Service to the profession

#### PROFESSIONAL SERVICE

2017- European Geophysical Union Member

LBNL Women Scientists and Engineers Council Empowerment Committee Member

2016- CRS BASIS Steering Committee Member

2016 CCIWG International Decade of Soil Workshop Organizer

AGU Global Environmental Change Executive Committee Member

LTER Higher Education Working Group Member
 LTER Harvard Forest Graduate Student Representative

Ecological Society of America Member
American Geophysical Union Member

Reviewer for 15+ journals, including: Nature Climate Change, Nature Communications, Global

Change Biology, New Phytologist, Soil Biology \$ Biochemistry, Geoscientific Model Development,

Biogeosciences, Agricultural & Forest Meteorology, Geoderma

#### Outreach

The Climate Music Project Science Advisor

2015-2016 CRS BASIS Volunteer & Team Leader

2012-2015 BU Advocates for Literacy in Environmental Sciences Founding Member

(Received Graduate Student Organization Award for Excellence in Student Activities)

Pierce School Climate Change Summit Moderator

Curley K-8 School Science Fair Judge
NSF GK-12 GLACIER Fundraiser Organizer

2011 Summer Pathways Program: Tech Savvy Program Coordinator

Biology Inquiry & Outreach with Boston University Graduate Students Volunteer Instructor

# Media Mentions

2018	When Rainforest is Cleared for Palm Oil, a Jet Liner of Carbon is Produced Inverse
2017	EESA Leads Development of New-Generation Soil Carbon Model EESA News Page
2017	Editor's Highlight Journal of Geophysical Research: Biogeosciences
2017	EESA Research Shines Light on Role Soil Microbes Play in Carbon Sequestration EESA News Page
2015	Tracing Our Roots: GRS student digs deep into the carbon cycle BU Today

# Programming Skills

R, Matlab, Fortran, Python, High Performance Computing