

Brittain M. Briber

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Research Interests and Skill Set

In the context of global change biology, I study urban and terrestrial ecology, including the effects of land cover change on vegetation dynamics and carbon cycling. I am also engaged in undergraduate STEM instruction and pedagogy, and include my students in my research.

Education

Ph.D. (2015)	Boston University , Geography
M.A. (2008)	Boston University , International Relations & Environmental Policy
M.S. (2002)	Universitat Politècnica de Catalunya , Seismic Engineering
B.S. (2000)	Washington University , Civil Engineering

Appointments

2015 - Present	Boston University , Boston MA <i>Lecturer, Dept. of Earth and Environment</i>
2010 - 2015	Boston University , Boston MA <i>Research Assistant/Teaching Fellow, Dept. of Earth and Environment</i>

Publications

2016	Raciti, S.M., Briber, B.M. , Hutyra, L.R., [In Prep] <i>Changes in Soil Properties Following Forest to Urban Land Conversion</i> .
2015	Briber, B.M. , Urbanization, the carbon cycle, and ecosystems: an exploration of coupled dynamics and feedbacks (Doctoral dissertation, Boston University), 2015. Briber, B.M. , Hutyra, L.R., Reinmann, A.B., Raciti, S.M., Dearborn, V.K., Holden, C.E., Dunn, A.L., <i>Tree productivity changes following conversion from forest to urban land uses</i> , Plos One, DOI: 10.1371/journal.pone.0136237, 2015.
2013	Briber, B.M. , Hutyra, L.R., Dunn, A.L., Raciti, S.M., Munger, J.W., <i>Variations in atmospheric CO₂ and carbon fluxes across a Boston, MA urban gradient</i> . Land, 2(3): 304-327, 2013.

Teaching Experience

2015 - Present	Lecturer , Boston University, Earth and Environment <i>Classes Instructed:</i> <ul style="list-style-type: none">• Natural Environments: The Atmosphere (GE 101)• Environmental Change and Sustainability (GE 100)
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2010 - 2015

Teaching Fellow, Boston University, Earth and Environment

Classes Instructed:

- Natural Environments: The Atmosphere (GE 101)
- Environmental Change and Sustainability (GE 100)
- Fundamentals of International Economics (IR 292)

Undergraduate Mentoring and Current Research

2016 – Present

Under my guidance, two of my students are building a cheap, \$300 portable gas analyzer using an Arduino and off-the-shelf components. This project will help 1) them to better understand the carbon cycle and 2) me to ascertain the viability of using cheap gas analyzers in academic and citizen science settings.

Pedagogical Training

2015 (Fall)

An Introduction to Evidence-Based Undergraduate STEM Teaching Administered by the Center for the Integration of Research, Teaching, and Learning (CIRTL), this class explored active learning techniques for collegiate STEM educators

Fellowships Awarded

2013

Biogeosciences Fellowship Award, Boston University, Earth and Environment

2007

International Relations Graduate Assistantship, Boston University, International Relations

Presentations and Posters

2012

“Hourly patterns of CO₂ in the atmosphere over Boston, MA: An assessment of natural and anthropogenic drivers” Conference on Agricultural and Forest Meteorology, Boston, MA (Poster) and Harvard Forest Long-Term Ecological Research Area Annual Meeting, Petersham, MA (Poster).

Analytical Skills

The R Project for Statistical Computing including R Shiny, data.table, and chron packages (advanced)

Command line and Unix Bash shell scripting (working knowledge)

ESRI's ArcMap and QGIS (working knowledge)

Microsoft Word, Excel, and Powerpoint (advanced)

Picarro, Licor, and Campbell Scientific analyzers (advanced)

Above- and below-ground biometric data collection including species identification and tree and soil coring (advanced)

Other Work Experience

2006 - 2008

Green Building Consultant (Green Roundtable, MA)

- Aided building managers in achieving LEED AP Existing Building certification

1999 - 2004

Civil/Structural Engineer I, St. Louis MO, Los Angeles CA, and Boston MA

- Designed wood, masonry, concrete, and steel multi-story buildings

Languages and Accreditations

Legacy LEED AP (June 2008)

Engineer in Training (April 2000)

Fluent in Spanish