



CAMPUS CLIMATE LAB

Fall 2022

Today's agenda

1. Introductions
2. Campus Climate Lab overview
3. How do I apply?
4. Anthony Janetos Prize
5. Questions

Trajectory of Campus Climate Lab



Climate Action Plan
(December 2017)



**CCL projects under BU
Sustainability**
(2020-2022)



**Expansion beyond
Climate Action Plan
to all disciplines**
(2022-)



Institute for Global Sustainability

BU Sustainability
BU Office of Research

Why Campus Climate Lab?

The Campus Climate Lab seeks to **advance research and catalyze our community** by promoting, demonstrating, and implementing our commitment to **sustainability, climate action, and equity and justice.**

The Campus Climate Lab is an opportunity to use the BU campuses as a **living laboratory** to advance sustainability practices.

What types of projects?

WHAT

Any discipline: engineering, humanities, health, social and natural sciences, communications, business, fine arts, etc.

WHO

Undergraduate or graduate students, faculty, staff. Projects that support the goals of the University **Climate Action Plan** or advance the **equity and justice aspects of sustainability** are especially encouraged.

WHERE

Grounded on the BU campus, but teams encouraged to foster connections and impacts in neighborhoods **beyond the campus** (please note entities external to BU are not able to receive funding).

Team make-up

All Campus Climate Lab research teams must include both **student(s) and mentor(s)**.

Mentors can be either faculty or graduate students.

Collaboration with a **BU Operations staff** (e.g., Facilities Management & Operations, etc.) is necessary if there is a need to locate appropriate data and establish study sites on campus.

Project ideas

Equity and justice aspects of climate change

- Impacts of BU waste generation on local communities
- Equity and justice aspects of BU energy and material use
- Multimedia, art installation, or street theatre on the intersection of anti-racism and sustainability

Climate preparedness

- Early warning capabilities for heat waves and air quality alerts
- Indoor or outdoor air quality on Charles River and Medical Campuses
- Permeable pavement to reduce flooding
- Reduce the urban heat island effect

Project ideas

Direct emissions

- Reducing BU energy demand by 31% by 2032
- Pathways to improve building efficiency
- Shift energy sources toward renewables
- Track, manage, and report carbon sequestration on BU properties

Indirect emissions

- Waste stream logistics, metrics, and greenhouse gas accounting
- Real-time waste/recycling weight and composition data at the container level
- Scope 3 analysis for the University's supply chain

Institute for Global Sustainability student email list

<https://www.bu.edu/igs/get-involved/students/email-sign-up/>



- Internships and research opportunities
- Student jobs in IGS operations and communications
- Jobs with external partners
- Invitations to institute events
- Summer fellowship program

Contact Campus Climate Lab

cclab@bu.edu

A wide-angle photograph of a city street with tram tracks in the center. Buildings line both sides, and there are cars and a bus on the road. The scene is bright and clear.

Campus Climate Lab: Application Process

Email us: cclab@bu.edu

CAMPUS CLIMATE LAB

We're looking for students and faculty ready to advance research and catalyze our community towards climate action.

The Campus Climate Lab is an opportunity for student-faculty teams to submit their best ideas for research projects designed to make Boston University's campus and operations more sustainable. The most promising ideas will be selected for funding and implementation.

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[Research Projects](#)

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[learn more](#)

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[Anthony Janetos
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About Campus Climate Lab

The Boston University Institute for Global Sustainability (IGS), in collaboration with [BU Sustainability](#) and the Office of Research, invites research proposals from student and faculty teams to generate new knowledge on the impacts, adaptation, and/or mitigation of climate change that can be implemented at BU and beyond. The Campus Climate Lab is an opportunity to use the BU campuses as a living laboratory to advance sustainability practices.

Apply → The next deadline for proposals is October 3, 2022.

Overview



Information and project brainstorming sessions



Research teams



Apply: How to submit your research proposal



Project topic ideas



Funding



Anthony Janetos Climate Action Prize



Timeline



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<https://www.bu.edu/igs/research/campus-climate-lab/about/>

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Information and project brainstorming sessions



Research teams



All Campus Climate Lab research teams must include both student(s) and mentor(s). Mentors can be either faculty or graduate students. Collaboration with a BU Operations staff (e.g., Facilities Management & Operations, etc.) is necessary if there is a need to locate appropriate data and establish study sites on campus.

Research teams accepted into the Campus Climate Lab will be invited to participate in a luncheon to facilitate connections and exchange ideas across the diverse teams, as well as invited to events throughout the year geared toward the Institute for Global Sustainability (IGS) community.

Apply: How to submit your research proposal



Project topic ideas



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Below are a few examples of potential research themes and projects, some of which are drawn from the [Climate Action Plan](#). These examples are intended to be illustrative – do not feel limited to these themes.

Equity and justice aspects of climate change

- Identify impacts of BU waste generation on local communities
- Identify the equity and justice aspects of BU energy and material use
- Multimedia, art installation, or street theatre on the intersection of equity and sustainability

Climate preparedness

- Develop early warning capabilities for heat waves and air quality alerts
- Monitor indoor or outdoor air quality on Charles River and Medical Campuses
- Identify best practices and locations for permeable pavement to reduce flooding
- Identify best practices to reduce the urban heat island effect

Direct emissions

- Research toward reducing BU energy demand by 31% by 2032
- Determine pathways to improve building efficiency
- Explore strategies to shift energy sources toward renewables
- Accurately track, manage, and report carbon sequestration on BU properties

Indirect emissions

- Improve waste stream logistics, metrics, and greenhouse gas accounting
- Develop system for real-time waste/recycling weight and composition data at the container level
- Develop Scope 3 analysis for the University's supply chain

Learn more about [ongoing and past Campus Climate Lab projects](#).



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Research Projects

Campus Climate Lab projects seek to harness Boston University's campuses as testbeds for innovative climate solutions. Efforts can range from science and engineering to health and communications.

Apply

Project Spotlight

Influence of Landscape Management Practices on Urban Greenhouse Gas Budgets

Ongoing Campus Climate Lab Projects

Fostering diversity in sustainability at BU: An assessment of undergraduates' perceived barriers to and experiences with sustainability educational opportunities



Post-Consumer Waste Reduction Machine Learning Program



Rain Gardens on Cummington Mall to Support Resilient Infrastructure on Boston University's Campus



Evaluation of Alternative Sensors to Minimize HVAC Energy Use in BU Buildings and Ensure Indoor Air Quality



Warren Rooftop Mini-Garden



Developing Heating Electrification Strategies to Decarbonize Boston University's Charles River Campus



Previous Campus Climate Lab Projects

Zero Waste on the Charles River Campus: Development of a Recyclopedia App to Increase Student Accuracy and Confidence in Waste Sorting (Phase One)



Urban Heat Island Effect: A Study of Various City Surfaces and Their Impacts



Mapping Noise Pollution at Boston University and Other Boston Locations Before, During, and After the Pandemic with a Goal to Reduce Noise Pollution



Quantifying Scope 3 Emissions Associated with Employee Travel at Boston University



Impacts of closure periods on BU CO2 Emissions and local CO2 concentrations



Analysis of willingness to adopt personal care and cleaning products refill habits by undergraduate students living in BU dorms



<https://www.bu.edu/igs/research/campus-climate-lab/research-projects/>



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Overview

Information and project brainstorming sessions

Do you have an idea for a Campus Climate Lab project and need help connecting with faculty or students, finding an Operations partner, or refining your proposal? Join us for the information session and/or [project brainstorming sessions over Zoom](#). The Campus Climate Lab team will be available to help develop and refine ideas before proposals are due. Participation in the brainstorming sessions is optional and will not affect the award selection. See schedule below under timeline and register to attend.

Research teams

Apply: How to submit your research proposal

Project topic ideas

Funding

Anthony Janetos Climate Action Prize

Timeline

Information session

Monday, September 12, 10-11 am

[Register for Zoom details](#)

Proposal development session #1

Wednesday, September 14, 3-4 pm

[Register for Zoom details](#)

Proposal development session #2

Wednesday, September 28, 10-11 am

[Register for Zoom details](#)

Full proposals due

Monday, October 3, 5 pm

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Apply: How to submit your research proposal



To be considered for funding, submit a research proposal with the following elements:

1. **Project Overview** (2 pages max)

- Project title
- Research question that articulates the sustainability challenge the project will tackle
- Activities, outputs, and timeline
- Linkages to the goals of BU [Climate Action Plan](#) and/or themes of equity and justice
- Description of how the results of the project could be used to advance sustainability
- Project team, including names, roles, and departments of student(s), faculty or grad student mentor(s). Also list Operations partner if necessary.

2. **Abstract that summarizes the project** (200 words max)

3. **Budget with justification** (1 page max)

Submit your research proposal as a single PDF to cclab@bu.edu by 5 pm on Monday, October 3, 2022. Research awards are open to students and faculty of all BU schools and colleges. Proposals will be evaluated by a team of faculty and staff reviewers drawn from IGS affiliates and BU Sustainability.

Project topic ideas



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Funding will be commensurate with the scope of the project, with awards anticipated in the range of ~\$1,000 to > \$10,000 per year. Project duration can range from one semester up to one year.

Allowable expenses include student salary/stipend, research supplies, analytical costs, and publication/dissemination costs. For parity across projects, the undergraduate student hourly rate will be \$14.25/hour with no fringe. The graduate student hourly rate will be \$17/hour with 9.9% fringe.

Costs related to implementation of findings beyond the research project do not need to be included in the project budget.

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Full proposals due

Monday, October 3, 5 pm

Review Committee meets to select awards

Thursday, October 6

Expected start of approved research projects

Week of October 11



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Submit your research proposal as a single PDF to cclab@bu.edu by 5 pm on Monday, October 3, 2022

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Campus Climate Lab

Submit your 2-page proposal:

Contact us: cclab@bu.edu

Monday, October 3, 2022 (5:00pm ET)

Join us for *virtual* Proposal Development Sessions:

Wednesday 9/14, 3-4pm ET

Wednesday 9/28, 10-11am ET

We are seeking students and faculty to advance new research and help catalyze our community towards climate action!

Projects can take many shapes, but all should:

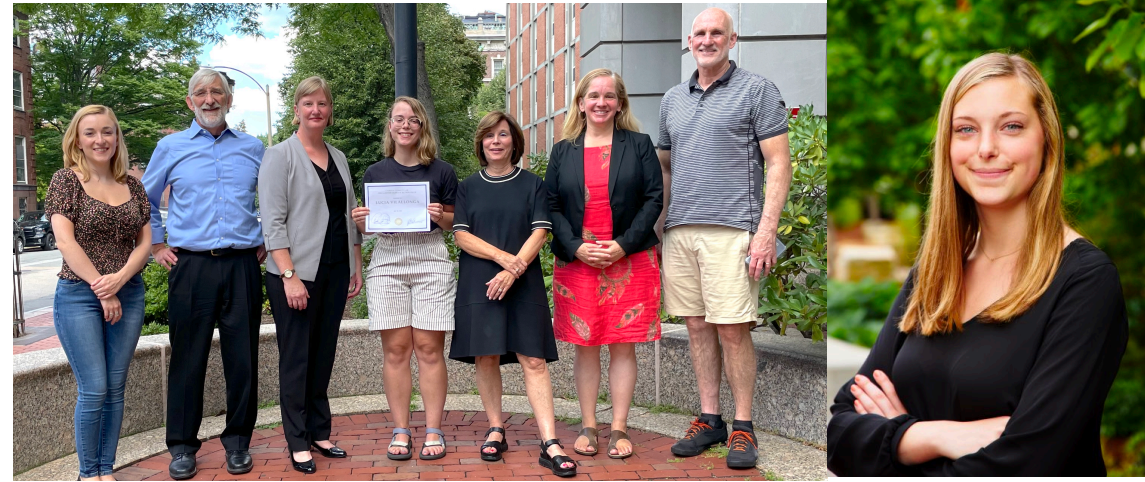
1. support the goals of the University's Climate Action Plan and/or themes of equity and justice,
2. be actionable so they can be integrated into the practices and culture of the University, and
3. include at least one mentor (faculty or grad student) and at least one student (undergrad or grad).

A photograph of Anthony Janetos, a man with grey hair and glasses, wearing a blue suit jacket, a light blue shirt, and a patterned tie. He is standing at a wooden podium with two microphones, gesturing with his hands as if speaking. The background is a blurred interior with light-colored walls and a wooden door.

Anthony Janetos Climate Action Prize

2022 winners: **Olivia Henning (CAS '22) & Lucia Vilallonga (CAS '22)**

- *Quantifying Scope 3 Emissions Associated with Employee Travel at Boston University*
 - Mentor: Dr. Jacqueline Ashmore



2021 winners: **Gayatri Sundar Rajan (ENG '22) & Keeley Bombard (CAS '22)**

- *Developing Heating Electrification Strategies to Decarbonize Boston University's Charles River Campus*
 - Mentors: Professors Michael Gevelber and Nathan Phillips

