

**CO<sub>2</sub>-Urban Synthesis & Analysis (CO<sub>2</sub>-USA)  
Workshop Agenda: Oct. 24<sup>th</sup>~26<sup>th</sup>, 2018  
University of Utah (Salt Lake City, UT)**



**DAY 1: October 24<sup>th</sup>, 2018 (Wed)**

*Location: Rice-Eccles Stadium,  
Scholarship Room, Level 4 (enter via Gate E,  
tower on north side)  
451 South 1400 East, Salt Lake City, UT  
84112*



**Day 1 Objectives: Facilitate conversations between scientists, stakeholders, and policy makers about**

- **current state of knowledge of urban GHG emissions**
- **knowledge gaps**
- **data and resource needs**
- **useful decision support for cities, counties, and beyond**

8:00~8:40 Registration, Breakfast, Poster Setup, Live-poll

**-----Introduction, Background [Chair: John Lin (Univ. of Utah)] -----**

8:40~9:00 Welcome, Description of Workshop Objectives  
*John Lin, Logan Mitchell (Univ. of Utah)*

9:00~9:20 Agency Perspectives  
*Ken Mooney, Monika Kopacz (NOAA), James Whetstone (NIST)*

9:20~9:40 Overview: Cities and Mayors: Advancing Climate Agendas in the  
Aftermath of the Paris Withdrawal  
*Katharine Lusk (Boston Univ.)*

**----- Stakeholder Perspectives [Chair: Katharine Lusk (Boston Univ.)] -----**

9:40~10:00 "Nexus of state-level climate policy to carbon monitoring in the Bay Area  
of California"  
*Abhinav Guha (Bay Area Air Quality Management District)*

**10:00~10:30 Keynote Address: [Mayor Jackie Biskupski, Salt Lake City]**

10:30~11:00 Coffee Break

**11:00~12:00 Stakeholder Perspective Panel Discussion: How Cities Are Measuring Progress towards Climate Goals**

***Moderator: Katharine Lusk (Boston Univ.)***

Panel members: *Vicki Bennett (Salt Lake City Sustainability Office), Luke Cartin (Park City Sustainability Office), Abhinav Guha (Bay Area Air Quality Management District), Thomas Herrod (Denver Dept. of Public Health & Environment)*

- What goals have network cities set for themselves?
- What action steps are they taking to achieve them?
- How are they measuring and assessing progress towards those goals?
- What tools are being used to track GHG emissions, and what are current gaps (if any) in the tools?

**----- Lunch and Poster Session -----**

**12:00~13:00 Lunch & Lightning Talks: Scientists Reporting on Progress for Practitioners:**

- What progress have scientists achieved in community-level monitoring, measurement and standardization?

**13:00~14:30 Poster Session: Stakeholder Engagement & Science Advances in Network Cities**

**----- Breakout & Plenary Discussions [Chair: Lucy Hutyra (Boston U)] -----**

**14:30~15:30 Breakout Groups**

- Needs Assessment: Surveying City Sustainability and Climate Offices: What more do we need to know? [lead: *Katharine Lusk, Conor Gately (Boston Univ.)*]
- Tackling Scope 1-3 emissions: How should we be helping cities understand induced demand versus on-site, carbon flows? [lead: *Lucy Hutyra (Boston Univ.), Logan Mitchell (Univ. of Utah)*]
- How long-term urban planning can take carbon emissions into account [lead: *Daniel Mendoza, Martin Buchert (Univ. of Utah)*]

**15:30~16:10 Plenary Discussion**

- Reporting from breakout groups
- Lessons on Transdisciplinary Collaboration: how do we support urban research and sustain collaborations with cities?

----**International & Closing Perspectives [Chair: Logan Mitchell (Univ. of Utah)]**----

16:10~16:30 World Meteorological Organization's Integrated Greenhouse Gas  
Information System (IG<sup>3</sup>IS)

*Felix Vogel (Environment & Climate Change Canada)*

----- **Optional Lab Tours** -----

17:00-18:00

1) Visit to the Utah Atmospheric Trace gas & Air Quality (U-ATAQ) Lab  
*Ryan Bares (Univ. of Utah)*

2) Visit to the Stable Isotope Ratio Facility for Environmental Research (SIRFER)  
*Jim Ehleringer, Suvankar Chakraborty (Univ. of Utah)*

----- **Group Dinner** -----

19:00 **Group Dinner**

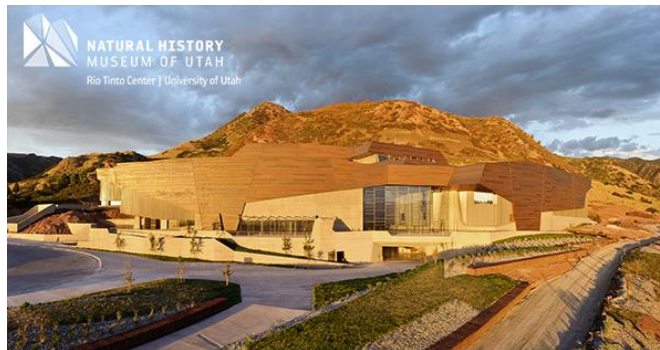
Location: **Salt Lake City Marriott University Park, Bonneville Ballroom II**

Dinner Talk: Driving GHG Reductions and Verification Forward

*Paul Shepson (Stony Brook University)*

## DAY 2: October 25<sup>th</sup>, 2018 (Thurs)

**Location:** *Natural History Museum of Utah, Swaner Forum, Level 5*  
301 Wakara Way, Salt Lake City, UT 84108



### Day 2 Objectives:

- **Report progress on urban GHG synthesis activities**
- **Identify remaining holes and uncertainties**
- **Create plan for inter-city analyses and synthesis activities in the coming year**

### 8:00~8:30      Registration, Breakfast

8:30~8:40      Introduction to Day 2 of CO<sub>2</sub>-USA workshop  
*John Lin (Univ. of Utah)*

### ----- Updates from Working Groups, Atmospheric Modeling [Chair: John Lin] -----

8:40~9:00      Cross-city merged GHG dataset  
*Logan Mitchell (Univ. of Utah)*

9:00~9:20      New merged atmospheric model/HYSPLIT-STILT  
*Chris Loughner (Univ. of Maryland/NOAA Air Resources Lab)*

9:20~9:40      Urban inversion working group  
*Kim Mueller (NIST)*

9:40~10:00      Atmospheric transport in an urban context  
*Ken Davis (Penn State Univ.)*

10:00~10:20      Discussion

### 10:20~10:40              Coffee Break

### ----- Bottom-up Inventory Development [Chair: Conor Gately (Boston Univ.)] -----

10:40~11:00      Urban biosphere fluxes  
*Lucy Hutyra (Boston Univ.)*

11:00~11:20      New ACES anthropogenic inventory  
*Conor Gately (Boston Univ.)*

11:20~11:40      GHG inventory and linkages with air quality-relevant inventories

*Vincent Camobreco (Environmental Protection Agency)*

11:40~12:00 Urban high-resolution emissions data products: capabilities, convergence, and comparisons  
*Kevin Gurney (Northern Arizona University)*

12:00~12:20 Discussions

## **12:20~13:20 Lunch**

### **----- Urban GHG Observations [Chair: Anna Karion (NIST)] -----**

13:20~13:40 GHG source sector apportionment with isotopes and air quality-relevant tracers.  
*Jocelyn Turnbull (GNS Science, New Zealand)*

13:40~14:00 Urban emissions from East Coast Outflow Experiment  
*Colm Sweeney (NOAA-ESRL)*

14:00~14:20 Observing CO<sub>2</sub> hotspots from space: the OCO-2 experience and OCO-3 new capabilities  
*Thomas Kuros (NASA Jet Propulsion Laboratory)*

14:20~14:40 Prospects for near term detection of emission reductions  
*Ron Cohen (Univ. of California, Berkeley)*

14:40~15:00 Discussions

- Are we measuring the right things? What is still missing?
- How can the different observations be combined?

## **15:00~15:20 Coffee Break**

### **----- Synthesis, Challenges, Next Steps [Chair: Logan Mitchell] -----**

15:20~15:40 Challenges carrying out inverse modeling at urban scale  
*Taylor Jones/Steve Wofsy (Harvard Univ.)*

## **15:40~17:00 Plenary Discussion: Next Steps**

- Do we have what we need to understand urban the carbon budget? What is still missing?
- Cross-city synthesis activities
- Papers
- Funding
- Other steps

### **DAY 3: October 26<sup>th</sup>, 2018 (Fri)**

Morning field trip up to Wasatch Mountains, Snowbird Resort/Hidden Peak CO<sub>2</sub> site

*Departing at 8:30am from: Marriott Hotel, 480 Wakara Way, Salt Lake City, Utah 84108*

