Meeting Agenda

For the 'FLUXNET-CH4 V2.0: Towards a more global characterization of methane-emitting sites' workshop on October 21 to 23, 2024

Purpose:

This hybrid workshop will focus on data processing to facilitate the inclusion of new sites into FLUXNET-CH4 V2.0 and the FLUXNET data system. We also aim to foster collaborations and knowledge-sharing amongst flux scientists from across the globe.

Specific objectives of the workshop include:

1) Provide an overview of FLUXNET-CH4 V2.0 and the FLUXNET data system.
2) Provide tutorials and code to facilitate the inclusion of new or existing sites into FLUXNET-CH4 V2.0 and the FLUXNET data system initiative. Additional guidance will be provided on gap-filling, and uncertainty quantification for flux tower measurements, with an emphasis on CH_4 fluxes.
3) Facilitate the inclusion of CH_4 fluxes in the ONEFlux pipeline and thereby inform the next generation of the FLUXNET database.
4) Foster existing and new international community collaborations by bringing together students/postdocs and PIs from across the globe.

Note that participants do not need to attend the full workshop. The same data wrangling/formatting tutorials will be offered three times so you can attend the one that is best suited to your schedule. Also, instructions for the tutorials can be found here, and will be recorded and made available after the meeting on the FLUXNET website for the workshop.

NOTE: ***if you plan on using your site data for the tutorials and your data does not follow standard Campbell (TOA5 files) or Licor (e.g., EddyPro or Smartflux files) data formats, please upload a small sample (i.e., 48 lines of observations + headers or <10MB) of your data here.*** You can create a folder for your site and label it using its site name. Note that this is for the computed fluxes and met data (NOT the high frequency data).

Workshop Leads:
Sara Knox, McGill University
Alison Hoyt, Stanford University
Gavin McNicol, University of Illinois
Kyle Delwiche, University of California, Berkeley
Rob Jackson, Stanford University

Location:

This is a hybrid workshop. The Zoom link for the full workshop is:
https://mcgill.zoom.us/j/82632017759?pwd=VXjyUSLT1Cx3BhMw82gUbaBvoFEPOL.1
Meeting ID: 826 3201 7759
Passcode: 766594

For those wishing to participate in person, the meeting will be held at the **Residence Inn Berkeley (in the Ashby Room)**. Unfortunately travel funds are not available, so please note that participants are expected to cover their own travel expenses if attending in person.

PLEASE NOTE THAT IN-PERSON ATTENDANCE HAS REACHED MAXIMUM CAPACITY SO IF YOU HAVEN'T REGISTERED YET, WE LOOK FORWARD TO SEEING YOU VIRTUALLY.

Agenda

Day 1 - Monday Oct. 21, 2024

Time (PDT)	Description
8:30-9:30	Breakfast
9:30-10:20	Introduction to FLUXNET-CH4 V2.0 and FLUXNET Data System ● Welcome: Sara Knox, McGill University ● FLUXNET-CH4: Rob Jackson, Stanford University ● FLUXNET Data System: Trevor Keenan, University of California, Berkeley ● Updates from Euroflux and Ameriflux: Dario Papale, University of Tuscia and AmeriFlux Management Project
10:20-11:00	Past success of FLUXNET-CH4 V1.0 ● Data synthesis: success, challenges, and future directions: ○ Sara Knox, McGill University ● Regional to global upscaling & Multiscale analysis and modeling ○ Qing Zhu, LBNL ○ Gavin McNicol, University of Illinois
11:00-11:15	Coffee Break
11:15-12:00	High frequency data considerations and opportunities ● Automating and Streamlining Flux Processing in EddyPro® ○ June Skeeter, Geological Survey of Canada ● Frequency response correction of noisy measurements ○ Toprak Aslan, University of Helsinki ● Leveraging high frequency data to detect ebullitive methane fluxes ○ Ben Runkle, University of Arkensas
12:00-13:00	Lunch
13:00-15:00	Data formatting tutorial #1 ● How to QCQA and format data for submission to regional networks ● Data visualization tools ○ Led by Rosie Howard & Paul Moore, McGill University

15:00-17:00	Breakout rooms and trouble shooting for data wrangling tutorial #1 ● Hands on assistance with code for data QCQA and formatting for submission to regional networks
	Dinner

Day 2 - **Tuesday Oct. 22, 2024**

Time (PDT)	Description
7:30-8:00	Breakfast
8:00-9:45	Data formatting tutorial #2 ● How to QCQA and format data for submission to regional networks ● Data visualization tools ○ Led by Rosie Howard & Paul Moore, McGill University
9:45-10:00	Break
10:00-12:00	Breakout rooms and trouble shooting for data wrangling tutorial #2 ● Hands on assistance with code for data QCQA and formatting for submission to regional networks Breakout group for research synergies and questions about FLUXNET-CH4 V2.0
12:00-13:00	Lunch
13:00-15:00	Data formatting tutorial #3 ● How to QCQA and format data for submission to regional networks ● Data visualization tools ○ Led by Rosie Howard & Paul Moore, McGill University
15:00-17:00	Breakout rooms and trouble shooting for data wrangling tutorial #3 ● Hands on assistance with code for data QCQA and formatting for submission to regional networks
	Dinner

Day 3 - **Wednesday Oct. 23, 2024**

Time (PDT)	Description
8:00-8:30	Breakfast
8:30-10:00	Current approaches to CH_4 flux gap-filling and uncertainty quantification & tutorial for implementing existing code

	● Summary of current CH_4 flux gap-filling approaches ○ Gavin McNicol, University of Illinois ● Tutorial for implementing current CH_4 flux gap-filling approaches ○ Fa Li, Stanford University ● New AI approaches for CH_4 flux gap-filling ○ Matt Fortier, University of Montreal
10:00-12:00	Discussions on next steps for implementing CH_4 fluxes in ONEFlux ● Moderated by Sara Knox, Gavin McNicol, Dario Papale, and Gilberto Pastorello
12:00-13:00	Lunch