

Transcom-2022 program

Wageningen, 16+17 September 2022

Friday 16 September

Continental scale inversions

9:00-9:15 Welcome/opening

9:15-9:35 **Beata Bukosa** CarbonWatchNZ: Regional to National Scale Inverse Modelling of New Zealand's Carbon Balance (#27)

9:35-9:55 **Jeongmin Yun** Development of regional atmospheric inversion system for estimating terrestrial CO₂ flux in Asia (#11)

9:55-10:15 **Santiago Botia** Towards constraining the vegetation carbon sink in tropical South America (#36)

10:15-10:35 **Discussion**

Break

CH₄ inversions

11:00-11:20 **Michael Steiner** Ensemble-based inverse estimates of European CH₄ emissions with ICON (#10)

11:20-11:40 **Naveen Chandra** Isotope (13C-CH₄, D-CH₄) modelling of CH₄ using MIROC4-ACTM (#28)

11:40-12:00 **Anita Ganesan** Evaluation of methane emissions in the UK 1990-2021 (#35)

12:00-12:20 **Discussion**

Lunch

Urban and regional scale transport and inverse modelling / Exploiting constraints on plumes and point sources

13:30-13:50 **Brian Nathan** Leveraging Improved Measurement Coverage to Characterize the Evolution of Oil-Production-Related Emissions around Lake Maracaibo, Venezuela (#8)

13:50-14:10 **Elena Fillola** Emulated Lagrangian particle dispersion model footprints for greenhouse gas flux inference (#24)

14:10-14:30 **Alexandre Danjou** Satellite monitoring of urban CO₂ emissions: an extensive analysis of the OCO-3 SAMs database (#42)

14:30-14:50 **Discussion**

Break

Atmospheric inversions of global (multi-tracer) greenhouse gas budgets

15:30-15:50 **Joram Hooghiem** CarbonTracker Statistical Fit, multi-tracer inversion using remote-sensing proxies of NEE, (#3)

15:50-16:10 **Yuming Jin** Using airborne CO₂ observations and a mass-indexed isentropic coordinate to test transport models and improve surface flux estimates (#17)

16:10-16:30 **Philippe Peylin** Simulation of atmospheric COS mixing ratio: Evaluating the impact of transport and emission distribution on COS tropospheric variability using ground-based, aircraft, and FTIR data (#38)

16:30-17:00 **Discussion**

17:00-18:30 **poster sessions + drinks (see next page for titles)**

19:00 **dinner** colors

Saturday 17 September

Results from RECCAP2, TRANSCOM, OCO2MIP, GCP and other joint efforts

9:00-9:20 **Sander Houweling** European methane inter-comparison experiment: status and first results (#23)

9:20-9:40 **Dominik Brunner** Why we need a new large-scale tracer release experiment to benchmark atmospheric transport models (#22)

9:40-10:15 **Discussion**

Break

10:45-11:00: **Britton Stephens** The APO Forward Model Experiment (#40)

11:00-11:15 **Ingrid Lujikx** Global atmospheric CO₂ inversions in RECCAP2 and GCP (#37)

11:15-11:30 **Sourish Basu** Surface Carbon Fluxes as Inferred by the OCO2 Model Intercomparison Project from Satellite and In Situ Atmospheric CO₂ Data (#39)

11:30-12:15 **Discussion**

Lunch

13:30 - 17:30 Excursions

Poster Session Friday night (rooms reserved only for this slot):

Requested posters

Anne-Wil van den Berg	Estimating fire CO ₂ emissions with a joint CO/CO ₂ inversion driven by satellite data (OCO-2, TROPOMI) for the Amazon in 2019	25
Antoine BERCHET	The Community Inversion Framework: a unified atmospheric inversion platform to support standardized GHG monitoring systems.	31
Chris Wilson	Are negative trends in global CO emissions since 2002 showing signs of stalling?	5
Dominik Brunner	A global tracer release experiment to benchmark inverse emission estimation models	27
leonid yurganov	AIRS v7 CO coupled with a box model confirms intensification of wildfires in the Northern Hemisphere	21
Dong Yeong Chang	Estimate of methane emission from the petrochemical industrial complex detected by TROPOMI	18
Yeonsoo Kim	Developing First Gridded High-resolution Anthropogenic Carbon Emission Inventory for Seoul	16
Chaerin Park	Assessment of long-term changes in atmospheric CO ₂ growth rate by integrating model and observations	30
Hayoung Park	Seoul-Tokyo Urban Atmosphere Greenhouse Gas Monitoring from Ground to Space	14
Carlos Gómez-Ortiz	Regional atmospheric inversions of CO ₂ and ¹⁴ CO ₂ over Europe with LUMIA	32
Ida Storm	A view of the European carbon flux landscape through the lens of the ICOS atmospheric observation network	12
Jaewon Joo	Estimation of methane emissions from urban infrastructures in Seoul, South Korea	15
Robin Plauchu	Regional scale inversion of NO _x emissions using NO ₂ satellite data in France	1
Sojung Sim	Bayesian inverse estimation of urban carbon emissions over Seoul	19
Tuula Aalto	Using atmospheric inverse modeling to estimate national methane emissions from Finland	41
Ute Karstens	A high-resolution process-based radon flux map for Europe: development and uncertainties	4
Stijn Naus	Assessing the importance of super-emitters versus diffuse oil/gas methane emissions in Algeria	2
Peter Bosman	Towards comprehensive modelling: ICLASS, an Inverse modelling framework for the Chemistry Land-surface Atmosphere Soil Slab model	6

Fabian Maier	Effects of point source emission heights in WRFâ€”STILT: a step towards exploiting nocturnal observations in models	7
Remco de Kok	High resolution CO2 fluxes from CarbonTracker Europe in near real-time: CTE-HR	9
Sangwon Joo	Introduction of IG3IS project in Korea	13
Theertha Kariyathan	Deriving robust estimates of carbon uptake period metrics based on time series of atmospheric CO2 and analysis of its interannual variability	20
Xin Lin	Discrepancies in recent methane emission changes inferred from surface versus GOSAT observations	26
Jagat Bisht	High resolution CO2 simulation over Kanto region in Japan using WRF-GHG model	29
Aki Tsuruta	Northern high latitudes CH4 fluxes inferred from an atmospheric inverse model using TROPOMI XCH4"	33
Suman Maity	Analysis of OCO-2 CO2 flux inversion (MIP-2) using MIROC4-ACTM simulations	34

Optional posters (not-selected presentations), **please inform us of a poster yes/no**

Gijs Leguijt	Quantification of carbon monoxide emissions from African cities using TROPOMI
Philippe Ciais	near-real-time estimates of greenhouse gas budgets
Alistair Manning	UK GHG inventory verification with InTEM

Zhiqiang Liu	Global and regional daily surface CO ₂ flux inferred from in-situ and OCO-2 B10 observations based on the Carbon in Ocean-Land-Atmosphere (COLA) system
Dmitry Belikov	Estimation of regional CH ₄ flux based on an ensemble of atmospheric inversions using MIROC4-ACTM
Rachel Tunnicliffe	OpenGHG: A community platform for greenhouse gas data analysis
Anita Ganesan	Evaluation of methane emissions in the UK 1990 – 2021
Guillaume Monteil	How important are transport model errors in regional inversions? A case study with LUMIA and CarboScope-Regional
Luciana V. Gatti	Are the models able to capture the changes in the forests? Amazon as a case study
Junjie Liu	The state of global carbon cycle in 2020
Subhomoy Ghosh	Metrics for assessing Linear Inverse Problems: a case study of a Trace Gas Inversion
Stephan Henne	Sensitivity of Inverse Modelling of Swiss non-CO ₂ Greenhouse Gas Emissions to Transport Model Resolution
Liang Feng	Contribution of tropical emissions to rapid growth of atmospheric methane in 2020/2021
Sourish Basu	Surface Carbon Fluxes as Inferred by the OCO₂ Model Intercomparison Project from Satellite and In-Situ Atmospheric CO₂ Data