ICOS-Belgium
Science conference

Morning

09:00 - 09:30 **Welcome coffee**

Conference opening

09:30 **Welcoming words.** Pascal Boeckx

09:40 **Key note.** N_2O Emission from terrestrial ecosystems: From field measurements to national predictions. Ralf Kiese

Session 1: Digging deep

10:15 Extending the BE-Vie ecosystem station characterization with NMVOCs and Ozone. Bert Verreyken

10:30 Diurnal dynamics of carbon and water fluxes under contrasting drought regimes. Mahum Naseer

10:45 - 11:20 **Coffee break**

11:20 Svalbard seawaters as a significant source of CH4 to the atmosphere during summer 2024. Coraline Leseurre

11:35 Multi-scale laser scanning for AGB Estimation at ICOS forest sites. Geike de Sloover

11:50 Carbon dynamics and greenhouse gas exchange in Papyrus (*Cyperus papyrus* L.) dominated wetlands in the Lake Victoria region (Kenya). Alfred Omondi Otom

12:05 Eddy covariance diverges from inventories and modelling on soil organic carbon stock depletion in a Belgian cropland over five rotations. Quentin Beauclaire

12:20 - 13:00 **Lunch**

WED 12 Nov
De Krook, Ghent

ICOS-Belgium
Science conference

Afternoon

Session 2: Scaling up

13:30 Linking ICOS and SOCAT pCO_2 observations with machine learning to assess marine heatwave impacts on coastal carbon cycling. **Maurie Keppens**

13:45 The potential of improving the estimation of national biogenic greenhouse gas emissions via the integration of crop identity. **Thilo Heinecke**

14:00 Exploring model uncertainty of the Congo basin rainforest carbon cycle. **Steven De Hertog**

14:15 WRF-Chem simulations of CO_2 over Western Europe assessed by ground-based measurements. **Jiaxin Wang**

14:30 – 15:05 **Coffee break**

Session 3: Looking beyond

15:05 Using ICOS fluxnet data in the Copernicus Land Monitoring Service – examples from the global and local component. **Else Swinnen**

15:20 ICOS-AnaEE connections aid understanding climate change impacts on soil microbial diversity. **Nadia Soudzilovskaia**

15:35 Climate overshoot effects on land ecosystem functioning. **Laura Boeschoten**

15:50 **Closing words**. **Ivan Janssens**

16:00 – 17:00 **Reception**

WED 12 Nov
De Krook, Ghent

ICOS-Belgium
Science conference

Poster presentations

During morning and afternoon coffee breaks & after lunch (13:00 – 13:30)

Session 1: Digging deep

01 Estimation of mesoscale contributions to surface flux exchanges from flux tower data using the continuous wavelet transform. **Neo Arquin**

02 Exploration of methane sources in southern Africa. **Martine De Mazière**

03 Interpreting carbon-water trade-offs in Daisy crop model. **Laura Delhez**

04 First atmospheric ICOS station in Belgium in support of the VERBE project. **Filip Desmet**

05 Multi-year observations of BVOC and ozone: concentrations and fluxes measured above and below the canopy in a mixed temperate forest. **Clément Dumont**

06 X-ray CT scanning for intra-seasonal tree biomass assessment. **Kobe Happaerts**

07 Closing the water cycle: Impact of forest type and deforestation on the local water balance. **Sarah Lamotte**

08 Estimating vegetation optical depth with GNSS transmissiometry in the ICOS site of Vielsalm. **Benjamin Lecart**

09 Using the VLIZ ICOS stations measurements to assess the carbonate chemistry trends of the Belgian part of the North Sea. **Hannelore Theetaert**

WED 12 Nov
De Krook, Ghent

Poster presentations

During morning and afternoon coffee breaks & after lunch (13:00 – 13:30)

Session 2: Scaling up

10 Real-Time identification and tracking of convective flow structures using UAV-based neural networks. **Louis Alsteens**

11 Mechanistically tracking forest photosynthesis and transpiration through multiscale chlorophyll fluorescence signals. **Quentin Beauclaire**

12 Gapfilling of eddy covariance data with tower-based and satellite-based remote sensing data. **Simon De Canniere**

13 Monitoring a pine forest using automated drone surveys. **Maarten Op de Beeck**

14 Holocene fire history reveals the young age of Gilbertiodendron dewevrei monodominant stands in Yangambi rainforest, Central Congo Basin. **Alain Sheria**

15 Carbon dioxide transport in the stable boundary layer over heterogeneous surfaces: A large-eddy simulation study. **Shenghao Zhang**

Session 3: Looking beyond

16 MARTISLAB.be: a new mobile national facility for reactive trace gas studies. **Bert Verreyken**

17 KlimaatLINK builts bridges between climate science and schools. **Inez Vanhoutte**

18 CO_2 measurements at the land-ocean interface. **Tom Van Engeland**