TreeNet 10-year anniversary conference
Forest growth research - state of the art and future perspectives
Bad Bubendorf, Switzerland

Monday, 27 June 2022
09:00 - 10:15 Welcome with coffee and registration
10:15 Conference opening, **Roman Zweifel** (WSL) & **Michael Reinhard** FOEN

Chair: Sabine Augustin (FOEN)

10:40 - 12:40 Session 1: Essentials - Monitoring of site, environment, and vegetation
10:40 Keynote: **Henning Meesenburg** (NW-FVA, Göttingen, DE)
Monitoring of water fluxes and tree responses - the value of observations at the ecosystem level

11:20 **Brigitte Rohner** (WSL, Birmensdorf CH)
Studying growth in the Swiss NFI: Developments, achievements and challenges

11:40 **Axel Göttlein** (TU München, DE)
When talking about trees, you should not forget about the soil

12:00 **Sabine Braun** (IAP, Witterswil, CH)
Growth and nutrition of trees in Swiss permanent forest monitoring plots

12:20 **Flurin Bapst** (University of Arizona, US) -> online
Where, when, and how: Opportunities for forest monitoring networks to tackle scaling uncertainties

Chair: Günter Hoch (Uni Basel)

12:40 - 13:40 Lunch
13:40 - 16:00 Sessions 2: Supersites - In-depth research
13:40 Keynote: **Patrick Meir** (University of Edinburgh, UK)
Using large-scale experimental soil moisture reduction to understand long-term growth responses in Amazon rainforest

14:20 **Christoph Leuschner** (Uni Göttingen, DE)
Drought response and drought acclimation of Beech in Northern Germany: Results of a precipitation gradient study

14:40 **Thorsten Grams** (TU München, DE)
Five years of experimental summer drought and recovery – Responses of a mixed beech/spruce forest

15:00 **Richard Peters** (Uni Basel, CH)
Echoes from Swiss Canopy Crane I: Stomatal control is optimized for avoiding stem dehydration and not branch cavitation

15:20 **Nina Buchmann** (ETH Zürich, CH)
The Swiss FluxNet: a success story with 111 site-years

15:40 **Arthur Gessler** (WSL, CH)
Stable isotopes as tools to assess tree functioning

Chair: Ansgar Kahmen (Uni Basel)

16:00 BREAK
16:40 - 19:00 Sessions 3: Linking sites - Near real-time biological signals
16:40 Keynote: **Frank Sterck** (Uni Wageningen, NL)
How do near-real time biological signals relate to long term tree performance?

17:20 **Cyrill Rathgeber** (INRAE, FR)
Global ecological trends in conifer xylem production

17:40 **Rafael Poyatos** (CREAF/UAB, ES)
Potential and challenges of site-level sap flow monitoring

18:00 **Jan Krejza** (Global Change Research Institute CAS, CZ)
Disentangling carbon uptake and allocation in the stems of a spruce forest

18:20 **Arun Bose** (WSL, CH)
Trees are growing earlier as Switzerland warms

18:40 **Roman Zweifel** (WSL, CH)
The rhythm of trees - the fascination of watching trees grow

19:00 BREAK
19:20 - 20:00 Workshop: White paper on the ideal forest research network of tomorrow

20:00 Conference Dinner

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Tuesday, 28 June 2022
07:00 - 08:30 Breakfast

Chair: Jordi Martinez Vilalta (uab)

08:30 - 10:50 Session 4: Remote sensing & Artificial intelligence
**   - Large-scale assessments and modeling**

8:30 Keynote: **Jan Eitel** (University of Idaho, US)
From Tree(Net) to landscape using remote sensing

9:10 **David Basler** (University of Basel, CH)
When you're green, your growing - Linking leaf- and wood growth phenology in trees

9:30 **Petra D'Odorico** (WSL, CH)
Capturing near-real time forest drought stress with drone based remote sensing

9:50 **Alexander Damm** (University of Zürich, CH)
Synergies between in situ super sites and satellite remote sensing for forest research

10:10 **Ana Bastos** (Max Planck Institute for Biogeochemistry, DE) -> online
Vulnerability of European ecosystems to consecutive hot and dry summers

10:30 **Mirko Lukovic** (EMPA, CH)
Enhancing and augmenting tree growth data with machine learning

10:50 BREAK
11:10 - 12:00 Wrap up
11:10 **Ansgar Kahmen** (Uni Basel, CH)
Infrastructure Hölstein

11:25 Wrap up / End of indoor conference

12:00 - 13:00 Lunch (Bags)

13:00 - 13:45 Workshop White Paper

Lead: Günter Hoch

13:30 - 18:30 Excursion SCCII Hölstein/Crane ride
13:30 Start Group 1 (about 3 hours)
14:15 Start Group 2
15:00 Start Group 3

The excursion to Hölstein will introduce the long-term forest monitoring station of the Institute of Applied Plant Biology (IAP) and the TreeNet Super Site Swiss Canopy Crane (SCC II) of the University of Basel. To facilitate transportation and guided tours, participants will be divided into three groups (maximum 16 people per group). All participants of the excursion are therefore asked to register for one of the three groups at the reception on the first day of the conference. Sturdy shoes and rain protection are recommended for the excursion.

18:30 End of excursion. Last group back to hotel