

Curriculum Vitae

Personal information

Name:	Richard L. Peters
Data/Place of birth:	6 th of October 1987, Naarden, the Netherlands
ResearchGate:	https://www.researchgate.net/profile/Richard-Peters-3
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Education

06/2014 – 06/2018	PhD in Botany (summa cum laude) , University of Basel, Switzerland & Swiss Federal Research Institute for Forest, Snow and Landscape Research (WSL), Switzerland Thesis: <i>“Transpiration, tracheids and tree rings: Linking stem water flow and wood formation in high-elevation conifers”</i> (https://edoc.unibas.ch/67835/). Advisors: Dr. Patrick Fonti & Dr. David C. Frank. Faculty representative: Prof. Dr. Ansgar Kahmen.
09/2009 – 11/2011	MSc in Environmental Science: Ecology and Natural Resource Management , Utrecht University, the Netherlands Thesis: <i>“The effect of priming and temperature on the decomposition of labile and recalcitrant litter”</i> . Advisors: Dr. ir. Mariet M. Hefting & Dr. Bas J.J. Dingemans.
09/2006 – 08/2009	BSc in Biology , Utrecht University, the Netherlands Thesis: <i>“Effect of abiotic conditions on plant growth in turf ponds: A theoretical study on the terrestrialization process”</i> . Advisors: Prof. Dr. Jos T.A. Verhoeven & Dr. Judith Sarneel.

Professional experience

10/2021 – 10/2025	Assistant/Postdoc in Physiological Plant Ecology and Climate Change Research , Physiological Plant Ecology Group, University of Basel, Switzerland Summary: Scientific manager of the Swiss Canopy Crane II experimental research site (https://ppe.duw.unibas.ch/en/sccii/). Host: Prof. Dr. Ansgar Kahmen.
01/2021 – 10/2021	Postdoc in Dendroecology , Gembloux Agro-Bio, University of Liège, Belgium Project: <i>“ADAPTED: Finding Climate-Adapted Trees in Northwestern Europe based on Dendrochronology/Xray CT densitometry of trees from different forest genetic resources”</i> . Host: Dr. ir. Tom de Mil & Prof. Dr. ir. Jan Van den Bulcke.
05/2019 – 12/2020	Postdoc in Plant Ecology , Laboratory of Plant Ecology, Ghent University, Belgium Project: <i>“Inter- and intra-specific water-use strategies of European trees: towards a better mechanistic understanding of tree performance during drought and warming”</i> (SNSF P2BSP3_184475). Host: Prof. Dr. ir. Kathy Steppe.
07/2018 – 04/2019	Postdoc in Dendrosciences , Forest Dynamics, Swiss Federal Research Institute for Forest, Snow and Landscape Research (WSL), Switzerland Project: <i>“Detecting changes in essential ecosystem and biodiversity properties – towards a Biosphere Atmosphere Change Index”</i> (H2020-EO-2014-640176 “BACI”). Advisors: Dr. Flurin Babst & Dr. David C. Frank.
01/2017 – 02/2017	Guest scientist in the Laboratory of Tree-Ring Research, University of Arizona, USA Summary: Discussing mechanistic modelling of tree rings. Host: Dr. David C. Frank
07/2017 – 08/2017	Guest scientist in the Laboratory of Plant Ecology, Ghent University, Belgium Summary: Finalize mechanistic growth model. Host: Prof. Dr. ir. Kathy Steppe.
11/2011 – 06/2014 (60%)	Consultant in Ecology and Nature Conservation , ARCADIS Belgium/Nederland Summary: Environmental impact assessments in Belgium and the Netherlands and modelling impact of climate change on biodiversity and ecosystem services for the Directorate-General for Environment of the European Commission. Collaborators: Dr. Veronique Adriaenssens & MSc Johan Lammerant.

03/2012 – 06/2014
(40%)

Guest scientist in the Forest Ecology and Management group,
Wageningen University and Research, the Netherlands
Project: “*Long-term trends in tropical tree growth: a pantropical study*”.
Advisors: Prof. Dr. Pieter A. Zuidema, Dr. Peter Groenendijk.

Grants

1. **Supplementary grant** funded by the Swiss National Science Foundation (31/05/2017 – 31/05/2018)
Research project: “*Coupling stem water flow and structural carbon allocation in a warming climate: the Lötschental study case (LOTFOR)*”. (33.910 CHF | 31.875 €)
2. **Early Postdoc.Mobility** funded by the Swiss National Science Foundation (01/05/2019 – 31/10/2020)
Research project: “*Inter- and intra-specific water-use strategies of European trees: towards a better mechanistic understanding of tree performance during drought and warming*”. (76.150 CHF | 71.581 €)
3. **Postdoc.Mobility** funded by the Swiss National Science Foundation (01/11/2020 – 31/12/2020)
Covid-19 pandemic extension grant: “*Inter- and intra-specific water-use strategies of European trees: towards a better mechanistic understanding of tree performance during drought and warming*”. (10.000 CHF | 9.308 €)

Peer reviewed journal articles (Citations: 998, h-index: 17, ISI-publications: 36)

1. **Peters RL**, Steppe K, Pappas C, Zweifel R, ..., Kahmen A. Accepted. Daytime stomatal regulation in mature temperate trees prioritizes stem rehydration at night. *New Phytologist*
2. Salomon RL, **Peters RL***, Zweifel R, Sass-Klaassen U, Lerink BJW, ..., Steppe K. 2022. The 2018 European heatwave led to stem dehydration but not to consistent growth reductions in forests. *Nature Communications* **13**: 28. *equally contributing first author (<https://doi.org/10.1038/s41467-021-27579-9>)
3. **Peters RL**, Pappas C, Hurley AG, Poyatos R, Flo V, Steppe K. 2021. Assimilate, process and analyse thermal dissipation sap flow data using the TREX R package. *Methods in Ecology and Evolution* **12**: 342–350. (<https://doi.org/10.1111/2041-210X.13524>)
4. **Peters RL**, Steppe K, Cuny HE, de Pauw DJW, Frank DC, ..., Fonti P. 2021. Turgor - a limiting factor for radial growth in mature conifers along an elevational gradient. *New Phytologist* **229**: 213–229. (<https://doi.org/10.1111/nph.16872>)
5. **Peters RL**, Miranda Garcia-Roves JC, Schönbeck L, Nievergelt D, Fonti MV, ..., Lehmann MM. 2020. Physiological monitoring of the 2018 larch budmoth outbreak: preference for leaf recovery and carbon storage over stem wood formation in *Larix decidua*. *Tree Physiology* **40**: 1697–1711. (<https://doi.org/10.1093/treephys/tpaa087>)
6. **Peters RL**, von Arx G, Nievergelt D, Ibrom A, Stillhard J, ..., Babst F. 2020. Axial changes in wood functional traits have limited net effects on stem biomass increment in European beech (*Fagus sylvatica*). *Tree Physiology* **40**: 498–510. (<https://doi.org/10.1093/treephys/tpaa002>)
7. **Peters RL**, Speich M, Pappas C, Kahmen A, von Arx G, ..., Fonti P. 2019. Contrasting stomatal sensitivity to temperature and soil drought in mature alpine conifers. *Plant, Cell & Environment* **42**: 1674–1689. (<https://doi.org/10.1111/pce.13500>)
8. **Peters RL**, Fonti P, Frank DC, Poyatos R, Pappas C, ..., Steppe K. 2018. Quantification of uncertainties in conifer sap flow measured with the thermal dissipation method. *New Phytologist* **219**: 1283–1299. (<https://doi.org/10.1111/nph.15241>)
9. **Peters RL**, Balanzategui D, Hurley AG, von Arx G, ..., Fonti P. 2018. RAPTOR: Row and position tracheid organizer in R. *Dendrochronologia* **47**: 10–16. (<https://doi.org/10.1016/j.dendro.2017.10.003>)
10. **Peters RL**, Klesse S, Fonti P, Frank DC. 2017. Contribution of climate vs. larch budmoth outbreaks in regulating biomass accumulation in high-elevation forests. *Forest Ecology and Management* **401**: 147–158. (<https://doi.org/10.1016/j.foreco.2017.06.032>)
11. **Peters RL**, Groenendijk P, Vlam M, Zuidema PA. 2015. Detecting long-term growth trends using tree rings: a critical evaluation of methods. *Global Change Biology* **21**: 2040–2054. (<https://doi.org/10.1111/gcb.12826>)
12. Zweifel R, Pappas C, **Peters RL**, ..., Sterck F. 2023. Networking the forest infrastructure towards near real-time monitoring – a white paper. *Science of the Total Environment* **872**: 162167. (<https://doi.org/10.1016/j.scitotenv.2023.162167>)
13. Vitali V, **Peters RL**, Lehmann MM, ..., Saurer M. Revisions. Tree-ring isotopes from the Swiss Alps reveal non-climatic fingerprints of cyclic insect population outbreaks in the past 700 years. *Tree Physiology* **00**: 1–16. (<https://doi.org/10.1093/treephys/tpad014>)

14. Klesse S, Babst F, Evans MEK, Hurley A, Pappas C, **Peters RL**. 2022. Legacy effects in radial tree growth are rarely significant after accounting for biological memory. *Journal of Ecology* **00**: 1–15. (<https://doi.org/10.1111/1365-2745.14045>)

15. Huang JG, ..., **Peters RL**, ..., Rossi S. 2022. A critical thermal transition driving spring phenology of Northern Hemisphere conifers. *Global Change Biology* (<https://doi.org/10.1111/gcb.16543>)

16. Pappas C, ..., **Peters RL**, ..., Kneeshaw D. 2022. Xylem porosity, sapwood characteristics, and uncertainties in temperate and boreal forest water use. *Agricultural and Forest Meteorology* **323**: 1–12. (<https://doi.org/10.1016/j.agrformet.2022.109092>)

17. Hurley AG, **Peters RL**, Pappas C, Steger DN, Heinrich I. 2022. Addressing the need for interactive, efficient, and reproducible data processing in ecology with the datacleanr R package. *PLOS ONE* **17**: e0268426. (<https://doi.org/10.1371/journal.pone.0268426>)

18. Etzold S, Sterck F, Ziemińska K, ..., **Peters RL**, ..., Zweifel R. 2022. Number of growth days and not length of the growth period determines radial stem growth of temperate trees. *Ecology Letters* **2**: 427–439. (<https://doi.org/10.1111/ele.13933>)

19. Anadon-Rosell A, Scharnweber T, von Arx G, **Peters RL**, Smiljanic M, Weddell S, Wilmking M. 2022. Growth and wood trait relationships of *Alnus glutinosa* in peatland forest stands with contrasting water regimes. *Frontiers in Plant Science* **12**: 1–14. (<https://doi.org/10.3389/fpls.2021.788106>)

20. Babst F, Friend A, Karamichalaki M, Wei J, von Arx G, Papale D, **Peters RL**. 2021. Modelling ambitions outpace observations of forest carbon allocation. *Trends in Plant Science* **3**: 210–219. (<https://doi.org/10.1016/j.tplants.2020.10.002>)

21. Zweifel, ..., **Peters RL**, ..., Eugster W. 2021. TreeNet – The biological drought and growth indicator network. *Frontiers in Forests and Global Change* **04**: 776905. (<https://doi.org/10.3389/ffgc.2021.776905>)

22. Poyatos R, Granda V, Flo V, Mencuccini M, ..., **Peters RL**, ..., Martínez-Vilalta J. 2021. Global transpiration data from sap flow measurements: the SAPFLUXNET database. *Earth System Science Data* **13**: 2607–264. (<https://doi.org/10.5194/essd-2020-227>)

23. Resente G, ..., **Peters RL**, ..., Wilmking M. 2021. Mask, train, repeat! Artificial intelligence for quantitative wood anatomy. *Frontiers in Plant Science* **12**: 767400. (<https://doi.org/10.3389/fpls.2021.767400>)

24. Huang JG, Ma Q, Rossi S, Biondi F, Deslauriers A, Fonti P, ..., **Peters RL**, ..., Ziaco E. 2020. Photoperiod and temperature as dominant environmental drivers triggering secondary growth resumption in Northern Hemisphere conifers. *PNAS* **117**: 20645–20652. (<https://doi.org/10.1073/pnas.2007058117>)

25. Huang JG, Ma Q, Rossi S, Biondi F, Deslauriers A, Fonti P, ..., **Peters RL**, ..., Ziaco E. 2020. Reply to Elmendorf and Ettinger: Photoperiod plays a dominant and irreplaceable role in triggering secondary growth resumption. *PNAS* **117**: 32865–32867. (<https://doi.org/10.1073/pnas.2019931117>)

26. Knüsel S, **Peters RL**, Haeni M, Wilhelm M, Zweifel R. 2021. Processing and extraction of seasonal tree physiological parameters from stem radius time series. *Forests* **12**: 765. (<https://doi.org/10.3390/f12060765>)

27. Castagneri D, Prendin AL, **Peters RL**, Carrer M, von Arx G, Fonti P. 2020. Long-term impacts of *Zeiraphera diniana* outbreaks on larch xylem structure and biomass accumulation. *Frontiers in Plant Science* **11**: 1–10. (<https://doi.org/10.3389/fpls.2020.01078>)

28. Zweifel R, Sterck F, ..., **Peters RL**, ..., Etzhold S. 2021. Why trees grow at night. *New Phytologist* **131**: 2174–2185. (<https://doi.org/10.1111/nph.17552>)

29. Cabon A, **Peters RL**, Fonti P, Martinez-Valalta J, De Cáceres M. 2020. Temperature and water potential co-limit stem cambial activity along a steep elevational gradient. *New Phytologist* **226**: 1325–1340. (<https://doi.org/10.1111/nph.16456>)

30. Pappas C, **Peters RL**, Fonti P. 2020. Linking variability in tree water and growth with species-specific resilience to environmental change. *Ecography* **43**: 1386–1399. (<https://doi.org/10.1111/ecog.04968>)

31. Perulli GD, **Peters RL**, Von Arx G, Grappadelli LC, Manfrini L, Cherubini P. 2022. Learning from the past to improve the future: tree ring and wood anatomy as retrospective tools to investigate orchard irrigation management. *ACTA Horticulturae* (<https://doi.org/10.17660/ActaHortic.2022.1335.21>)

32. Cuny HE, Fonti P, Rathgeber CBK, von Arx G, **Peters RL**, Frank DC. 2019. Couplings in cell differentiation kinetics mitigate air temperature influence on conifer wood anatomy. *Plant, Cell & Environment* **42**: 1222–1232. (<https://doi.org/10.1111/pce.13464>)

33. Petit G, von Arx G, Kiorapostolou N, Lechthaler S, Prendin AL, ..., **Peters RL**, ..., Sterck F. 2018. Tree differences in primary and secondary growth drive convergent scaling in leaf area to sapwood area across Europe. *New Phytologist* **218**: 1383–1392. (<https://doi.org/10.1111/nph.15118>)

34. Sánchez-Salguero R., Hevia A., Camarero JJ., Treydte K, Frank DC, ..., **Peters RL**, ..., Volařík D. 2017. An intensive tree-ring experience: connecting education and research during the 25th European Dendroecological Fieldweek (Asturias, Spain). *Dendrochronologia* **42**: 80–93. (<https://doi.org/10.1016/j.dendro.2016.12.005>)

35. Lintunen A, Paljakka T, Jyske T, Peltoniemi M, Sterck F, ..., **Peters RL**, ..., Hölttä T. 2016. Osmolality and Non-Structural Carbohydrate Composition in the Secondary Phloem of Trees across a Latitudinal Gradient in Europe. *Frontier in Plant Science* 7: 1–15. (<https://doi.org/10.3389/fpls.2016.00726>)
36. **Peters RL**, Kaewmano A, Fu PL; Fan Z, Sterck F, Steppe K, Zuidema PA. Revisions. High vapor pressure deficit enhances turgor limitation of stem growth in an Asian tropical rainforest tree. *Plant, Cell & Environment*.
37. **Peters RL**, Wüest RO, Büntgen U, Hacket-Pain AJ, Karger D, ..., Babst F. In Preparation. Climate sensitivity is a poor predictor of species' distributional margins. *Ecology Letters*.
38. Silvestro R, Mencuccini M, ... **Peters RL**, ... Rossi S. Submitted. Bridging forest carbon sources and sinks through intra-annual growth assessment. *Nature*.
39. Wang X, Yu M, Chen L, ... **Peters RL**, ... Rossi S. Submitted. The start of secondary growth is more sensitive to warming than that of primary growth in temperate and boreal trees. *Nature Climate Change*.

Book chapters

1. Pappas C, Babst F, Fatichi S, Klesse S, Paschalis A, **Peters RL**. 2023. A circumpolar perspective on tree contribution to the boreal forest carbon balance. In *Boreal Forests in the Face of Climate Change*. Editors: Miguel Montoro Girona, Hubert Morin, Sylvie Gauthier, Yves Bergeron. Springer, Cham. (https://doi.org/10.1007/978-3-031-15988-6_10)
2. Werner S, Szalai S, Kópatakai É, Kondor AC, Musco E, ..., **Peters R**, ..., Adriaenssens V. 2014. Future imperfect: Climate change and adaptation in the Carpathians. *UNEP* (ISBN: 978-82-7701-145-5)

Invited presentations

1. **Peters RL**, Steppe K, Pappas C, Zweifel R, Babst F, Dietrich L, von Arx G, Poyatos R, Fonti M, Fonti P, Grossiord C, Gharun M, Buchmann N, Steger D, Kahmen A. 2022. Define the water-use strategy: A case-study on hydraulic mechanisms regulating water use of European tree species during drought. XIM5, Würzburg, Germany. (Oral presentation [OP])
2. **Peters RL**, Steppe K, Kahmen A. 2022. Echoes from Swiss Canopy Crane I: Stomatal control is optimized to sustain stem rehydration and not cavitation in mature temperate trees. TreeNet 10-year anniversary conference, Bubendorf, Switzerland. (OP)
3. **Peters RL**, Salomón RL, Zweifel R, Sass-Klaassen UGW, Steppe K. 2022. The silent suffering of trees during the 2018 heatwave. TRACE, Erlangen, Germany. (OP)
4. **Peters RL**, Hurley AG. 2020. Online toolbox for data analysis. Q-NET Meeting, Birmensdorf, Switzerland. (Online Workshop [OW]; <https://qwa-net.com/>)
5. **Peters RL**, Pappas C, Zweifel R, Steppe K. 2020. Advanced Analyses of Tree Physiological Time Series in R and PhytoSim. ESA Annual Meeting, Salt Lake City, USA. (OW; <https://deep-tools.netlify.app/docs-workshops/esa-workshop2020/>)
6. **Peters RL**, Pappas C, Zweifel R, Poyatos R, Fonti P, Steppe K. 2019. TREX: an R package to foster comparable assessment of whole-tree water use estimates from thermal dissipation probes. XI International Workshop on Sap Flow, Hyytiälä, Finland. (OP)
7. **Peters RL**, von Arx G, Nievergelt D, Ibrom A, Stillhard J, ..., Babst F. 2019. Axial changes in stem growth and wood density indicate dynamic carbon allocation in European beech. TRACE, San Leucio, Italy. (OP)
8. **Peters RL**, Wüest RO, Büntgen U, Hacket-Pain AJ, Karger D, ..., Babst F. 2019. Habitat suitability vs. climatic sensitivity: Tracking the growth variability of major tree species throughout their bioclimatic niche. TRACE, San Leucio, Italy. (Poster Presentation [PP])
9. **Peters RL**, Steppe K, Frank DC, Cuny HE, De Pauw D, Schaub M, Fonti P. 2018. The power of turgor pressure in explaining conifer wood formation dynamics. ESA Annual Meeting, New Orleans, USA. (OP; <https://eco.confex.com/eco/2018/meetingapp.cgi/Paper/70273>)
10. **Peters RL**, Frank DC, Treyte K, Steppe K, Kahmen A, Fonti P. 2017. How to make a tree ring: Coupling stem water flow and cambial activity in mature Alpine conifers. EGU General Assembly, Vienna, Austria. (OP; <http://adsabs.harvard.edu/abs/2017EGUGA..1914285P>)
11. **Peters RL**, Klesse S, Fonti P, Frank D. 2016. Assessing the impact of larch budmoth outbreaks on tree biomass growth along an Alpine elevational gradient. TRACE, Białowieża, Poland. (PP)

12. **Peters RL**, Frank DC, Treydte K, Fonti P. 2014. Coupling stem water flow and structural carbon dynamics. EuroDendro, Lugo, Spain. (PP)

13. **Peters RL**, Groenendijk P, Vlam M, Zuidema PA. 2012. Methods for detecting long-term growth changes in tropical tree rings: a critical comparison. TRACE, Potsdam, Germany. (PP)

14. Vitali V, Peter RL, Lehmann M, Leuenberger M, Treydte K, Büntgen U, Schuler P, Saurer, M. 2023. Exploring the climatic and non-climatic fingerprints of the hydrogen isotope signals in tree rings. EGU General Assembly 2023, Vienna, Austria. (OP; <https://doi.org/10.5194/egusphere-egu23-4254>)

15. Klesse S, Babst F, Evans MEK, Hurley A, Pappas C, **Peters RL**. 2022. Drought legacy effects in radial tree growth are rarely significant under heightened statistical scrutiny. Ameridendro, Montreal, Canada. (OP)

16. Babst F, Friend AD, Karamihalaki M, Wei J, von Arx G, Papale D, **Peters RL**. 2022. Observations of carbon allocation in the world's forests must match pace with vegetation model development. EGU General Assembly 2022, Vienna, Austria. (OP; <https://doi.org/10.5194/egusphere-egu22-5943>)

17. Pappas C, ..., **Peters RL**, ..., Kneeshaw D. The role of xylem porosity on sapwood allometry and thermal conductivity of temperate and boreal tree species. EGU General Assembly 2022, Vienna, Austria. (OP)

18. Babst F, **Peters RL**, Wüest RO, Evans M, Büntgen U, ..., Zimmermann N. 2020. Hotspots of change in major tree species under climate warming. EGU General Assembly, Vienna, Austria. (OP)

19. Pappas C, **Peters RL**, Fonti P, Frank DC, Mahecha MD. 2018. Cross-scale temporal variability in conifer tree growth and hydrodynamics along an elevational gradient in the European Alps. AGU Fall meeting, Washington DC, USA. (OP)

20. Balanzategui D, Heußner KU, Wazny T, Helle G, **Peters RL**, ..., Heinrich I. 2017. Wood anatomical proxies from lowland European oak and Scots pine for climate reconstructions. TRACE, Svetlogorsk, Russia. (OP)

21. Fonti P, Bryukhanova M, Sviderskaya I, **Peters RL**, von Arx G. 2017. Tracheid anatomical changes of *Larix sibirica* under drought stress. TRACE, Svetlogorsk, Russia. (PP)

22. Zuidema PA, Groenendijk P, Vlam M, van der Sleen P, **Peters RL**. 2016. Reconstructing growth trends from tree-ring data: can we account for biases. Annual Meeting of the ATBC, Montpellier, France. (OP)

23. Speich MJR, **Peters RL**, Zappa M, Fonti P, Frank D, Treydte K, Kahmen A, Lischke H. 2016. Modelling ecohydrological processes on landscape scale: A ground truthing study on Alpine forests. EcoSummit, Montpellier, France. (PP)

24. Groenendijk P, **Peters RL**, van der Sleen P, Vlam M, Bongers F, Zuidema PA. 2014. Tree-ring analysis to detect centennial-scale growth changes in tropical tree species. TRACE, Aviemore, Scotland. (OP)

Teaching and mentoring activities

10/2022 – 10/2026 **Co-supervision PhD**, University of Basel, Switzerland
Students: MSc David Steger, & MSc Tobias Zhorzel. Supervisor: Prof. Dr. Ansgar Kahmen.

10/2021 – 10/2026 **Coordinator community service**, University of Basel, Switzerland
Summary: Supervising Swiss army servants supporting research activities.

11/2022 – 12/2022 **Lecturer** in Wood Anatomy, University of Basel, Switzerland
MSc/BSc Environmental Science students. Organisers: MD Dr. Günter Hoch.

09/2022 – 10/2022 **Teaching assistant** in Plant Biology, University of Basel, Switzerland
BSc Environmental Science students Organiser: Prof. Dr. Ansgar Kahmen.

02/2021 – 02/2023 **Guest lecturer** in Environmental Data Science, University of Helsinki, Finland
PhD students in Atmospheric Sciences. Organiser: Yann Salmon, & Jonathan Atherton.

01/2020 – 03/2021 **Co-supervision MSc**, Deutsches GeoForschungsZentrum (GFZ), Germany
Student: BSc David Steger. Supervisor: Dr. Ingo Heinrich.

10/2019 – 12/2020 **Co-supervision PhD**, Ghent University, Belgium
Student: ir. Willem Goossens. Supervisor: Prof. Dr. ir. Kathy Steppe.

06/2019 + 06/2020 **Thesis evaluation committee**, Ghent University, Belgium
MSc students. Organiser: Prof. Dr. ir. Kathy Steppe.

05/2017 **Teaching assistant** in Adv. data management & manipulation in R, WSL, Switzerland.
PhD and Postdoc students WSL. Organiser: Dr. Jan Wunder.

09/2016 + 09/2017	Teaching assistant in the Dendroecological Field Week. International PhD and MSc Students. Organiser: Dr. Kerstin Treydte.
06/2016 – 10/2016	Supervision Internship , WSL, Switzerland Student: MSc Annika Oertel. Co-supervisor: Dr. Kerstin Treydte.
10/2014	Guest lecturer in Dendroecology, ETH Zürich, Switzerland MSc students. Organiser: Dr. David C. Frank, Dr. Andreas Rigling, & Dr. Christof Bigler.
01/2013 – 07/2013	Supervision MSc – University Utrecht, the Netherlands. Student: BSc Gideon Terburg. Co-supervisor: Dr. Pita Verweij.

Personal skills

Research Experience

Mechanistic modelling: Performing calibrations, sensitivity analysis and simulations on stem hydraulic processes, tree growth and isotopic fractionation.

Field campaigns: Continuous automated monitoring of trees, wood increment core sampling, branch/leaf sampling and metadata collection in temperate and tropical forests.

Tree ring analysis: Ring width variation measurements and analysis.

Quantitative wood anatomy: Preparation and analysis of thin-sections from wood samples.

Stem diameter variation analysis: Point- and band-dendrometers measuring stem radial changes on a 15-minute resolution.

Leaf-level gas exchange measurements: LI-6800 Photosynthesis System.

Sap flow analysis: Heat-based sap flow measurements on tree stems using Thermal Dissipation Probes (TDP) and Heat Ratio Method (HRM).

Stable isotope analysis: $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ obtained from water, leaf tissue and wood samples.

Time-series analyses and statistics: Advanced statistical analyses of eco-physiological time-series measurements from a single site to the global level.

Programming languages: R including CRAN packages building and Python.

Specialized modelling and image analysis software: PhytoSim and ROXAS.

Geographic Information Systems: ArcGIS and QGIS.

Dutch (native), **English** (full professional), German (independent user), & French (basic user).

Voluntary worker in Conservation (02/2011), Iberian Wolf Recovery Centre, Portugal.

Representative of the Doctoral Researchers Committee (03/2016 – 03/2017), WSL, Switzerland.

Representative of the MSc Environmental Science Introduction Committee (09/2009 – 09/2010), University Utrecht, the Netherlands.

Peer-reviewing activities: New Phytologist; Plant, Cell & Environment; Global Change Biology; Agricultural and Forest Meteorology; Forest, Ecology and Management; Trees; Dendrochronologia; PLOS ONE; Annals of Forest Science; Journal of Biogeography; Climate of the Past; Tree Physiology; Hydrology and Earth System Sciences; Swiss National Science Foundation (SNSF proposal)

Awards: Doctoral examination in the field “Botany” at the University of Basel awarded *summa cum laude* (05/2018); Seal of excellence for the project proposal 835797, TREEFLOW, Submitted under the Horizon 2020’s Marie Skłodowska-Curie actions call H2020-MSCA-IF-2018 (03/2019)

Scientific memberships: Ecological Society of America (ESA); European Geosciences Union (EGU); STReESS COST Action – DendroGlobal, Tree Rings in Archaeology; Climatology and Ecology (TRACE); International Society for Horticultural Science (ISHS); Xylem International Meeting (XIM)

References: Prof. Dr. Ansgar Kahmen – University of Basel (ansgar.kahmen@unibas.ch), Prof. Dr. ir. Kathy Steppe – Ghent University (kathy.steppe@ugent.be), & Dr. Patrick Fonti – Swiss Federal Research Institute for Forest, Snow and Landscape Research (WSL) (patrick.fonti@wsl.ch)