CURRICULUM VITAE

Flurin Babst, PhD Assistant Professor School of Natural Resources and the Environment University of Arizona 1064 E Lowell St, Tucson, AZ 85719 520 621 1071 babst@arizona.edu

CHRONOLOGY OF EDUCATION

| 2009 - 2013 | Ph.D. in Physical Geography, Johannes Gutenberg University of Mainz, Germany & Swiss Federal Research Institute WSL, Birmensdorf, Switzerland Advisor: Prof. Dr. Jan Esper Dissertation title: "Climatic Drivers of Forest Productivity across Europe" Defense date: 1/10/2013 |
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| 2006 - 2009 | Master of Science in Geography, University of Basel, Switzerland Advisor: Prof. Dr. Eberhard Parlow Thesis title: <i>"Remote sensing and tree-ring based assessment of</i> Epirrita autumnata <i>defoliation in Fennoscandian Mountain Birch Forests"</i> Defense date: 5/15/2009 |
| 2002 2006 | Deckelon of Science in Consciences, University of Decel Switzerland |

2003 – 2006 **Bachelor of Science** in Geosciences, University of Basel, Switzerland

CHRONOLOGY OF EMPLOYMENT

| 01/2023 - present: | The University of Arizona (Assistant Professor) |
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| 02/2021 - 12/2022: | The University of Arizona (Assistant Research Professor) |
| 02/2019 - 01/2021: | Institute of Botany, Polish Academy of Sciences (Assistant Professor) |
| 10/2015 - 01/2019: | Swiss Federal Research Institute WSL (Postdoc / Research scientist) |
| 01/2013 - 09/2015: | Laboratory of Tree-Ring Research, The University of Arizona (Postdoc) |
| 06/2009 - 01/2013: | Swiss Federal Institute for Forest, Snow and Landscape Research (PhD student) |
| 08/2007 - 02/2008: | Swiss Federal Institute for Forest, Snow and Landscape Research (Internship) |
| 10/2006 - 02/2007: | German National Weather Service (Internship) |

HONORS AND AWARDS

- 2023 **International Collaborations Award** by the School of Natural Resources and the Environment at the University of Arizona.
- 2019 **Habilitation from the Polish Academy of Sciences** awarded by an interdisciplinary board of professors from Polish and international universities. This is the highest university degree in many European countries and entitles the awardee to chair PhD committees, amongst other privileges.

Dissertation title: "From trees to continents: understanding, quantifying and scaling forest growth processes and their biotic and abiotic drivers"

- 2013 **Magna cum laude PhD honors** awarded by the Johannes Gutenberg University of Mainz, Germany. This honor is reserved for excellent PhD dissertations and defenses and is equivalent to a GPA of 3.8 to 3.9 in the United States.
- 2009 Award for the best oral student presentation at the annual meeting of the Association for Tree-Ring Research (4/16-19/2009, Otocec, Slovenia). My talk "Forest disturbances caused by *Epirrita autumnata*: analysis and reconstruction of major outbreaks" summarized the findings of my Master's thesis and was later published in *Remote Sensing of Environment* (Babst et al. 2010).
- 2008 Award for the best oral student presentation at the annual meeting of the Association for Tree-Ring Research (4/27-30/2008, Zakopane, Poland). My talk "Blue reflectance: method and first results" presented the outcome of my internship at the Swiss Federal Institute for Forest, Snow and Landscape Research and was published as a short article in the conference proceedings.

COMMUNITY SERVICE

Editorial service:

Communicating Editor for the journal *Trees – Structure and Function* (2020 - present) Editorial Board Member of the journal *Forests* (2020 - present) Review Editor for the journal *Frontiers in Forests and Global Change* (2019 - 2022)

Proposal reviews:

U.S. National Science Foundation (NSF) Swiss National Science Foundation (SNSF) Czech Science Foundation (GAČR) Foundation for Polish Science (FNP; *panel expert*) National Science Center Poland (NCN)

Peer review of journal articles:

Nature Ecology and Evolution, Nature Communications, Trends in Plant Science, Ecology Letters, Scientific Reports, Scientific Data, Global Change Biology, New Phytologist, Global Ecology and Biogeography, Environmental Research Letters, Biogeosciences, Oecologia, Journal of Biogeography, Forest Ecology and Management, Ecosphere, Trees, Tree Physiology, Agricultural and Forest Meteorology, Ecosystems, Ecography, Science of the Total Environment, Ecological Applications, Dendrochronologia, PLOS ONE, Journal of Geophysical Research – Biogeosciences

Conference organization:

NASA ARID scoping study kick-off meeting, Oct 23-27, Tucson/Oracle, USA (Co-Organizer)

- European Geoscience Union general assembly, April 24-28, 2023, Vienna, Austria Session: "Interdisciplinary tree-ring research" (*Co-Convener*)
- AmeriDendro conference, June 27 July 1, 2022, Montreal, Canada Symposium: "Tree rings from national forest inventories: a timely opportunity to assess tree growth across space and through time" (*Co-Chair*)
- European Geoscience Union general assembly, April 3-8, 2022, Vienna, Austria Session: "Interdisciplinary tree-ring research" (*Co-Convener*)
- European Geoscience Union general assembly, April 19-30, 2021, Vienna, Austria

| Session: "Interdisciplinary tree-ring research" (Co-Convener) |
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| European Geoscience Union general assembly, May 3-8, 2020, Vienna, Austria |
| Session: "Interdisciplinary tree-ring research" (Co-Convener) |
| ATR TRACE annual meeting, May 7-11, 2019, Caserta, Italy. |
| Session: "Long-term climate variability retrieved from tree archives" (Convener) |
| Society membership |

Society membership:

American Geophysical Union (AGU 2023 – present) Society for Mining, Metallurgy and Exploration (SME 2023 – present) AmeriFlux Natural Climate Solutions (NCS) Working Group (2022 – present) Ecological Society of America (2015 – present) European Geosciences Union (2016 – present) Association for Tree-Ring Research (2012 – present)

TEACHING

Courses:

| 2023 | Fall semester: Climate Change and Dryland Ecosystem Ecology (RNR/WSM/HWRS/ECOL 452/552), 4 units, undergraduate and graduate course, 20 students. |
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| | Fall semester: Independent Study (RNR-599), 3 units, graduate course, 1 student. |
| | Spring semester: Directed Research (RNR-492), 2 units, undergraduate course, 1 student. |
| 2022 | Fall semester: Independent Study (RNR-499), 1 unit, undergraduate course, 1 student. |
| | Spring semester: Renewable Natural Resources Seminar (RNR-696A), 1 unit, graduate course, 9 students. |
| 2021 | Fall semester: Renewable Natural Resources Seminar (RNR-696A), 1 unit, graduate course, 21 |

2021 Fall semester: Renewable Natural Resources Seminar (RNR-696A), 1 unit, graduate course, 21 students.

Advising and mentoring:

| Postdocs & staff | Taylor Sheriff, primary mentor, UArizona, 2022-2023 Seth Irwin, primary mentor, UArizona, 2022-2024 Lyra McGrew Rahner, primary mentor, UArizona, 2022-2024 Cynthia Norton, secondary mentor, UArizona, 2021-2023 Richard Peters, primary mentor, Swiss Federal Research Institute WSL, 2018 |
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| Grad students | Jingshu Wei, main advisor, UArizona, since 2019 Cynthia Norton, main advisor, UArizona, since 2023 Charlie Devine, PhD committee member, UArizona, since 2021 Wen Zhang, PhD committee member, UArizona, since 2022 Tomasz Wlodarczyk, PhD minor advisor, UArizona, since 2023 Maria Karamichalaki, main advisor, Polish Academy of Sciences, 2019 |
| Undergrads/interns | Hope Njuguna, UArizona, 2023 Easton Thatcher, UArizona, 2023-2024 Reed Marie Coffey, UArizona, 2022-2023 Courtney Weber, UArizona, 2022 Aaron Judkins, UArizona, 2022 Jill Eliel, honors student, UArizona, 2021-2022 Helen Waltz, UArizona, 2021-2022 |

| | Szymon Miszczak, Polish Academy of Sciences, 2019 |
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| | Aleksandra Mazurkiewicz, Polish Academy of Sciences, 2017 |
| | Leon Prescott Wells, Univ. of Arizona, 2015 |
| | Fabienne Bauer, Swiss Federal Research Institute WSL, 2011 |
| Visitors | Cristina Valeriano-Peñas from the Pyrenean Institute of Ecology, Spain, hosted at Univ. of Arizona in Mar-Apr and Oct-Dec 2023 |
| | * |
| | Prof. Peter Groenendijk from the University of Campinas, Brazil, hosted at Univ. of Arizona in Mar 2023 |
| | Prof. Pieter Zuidema from Wageningen University, Netherlands, hosted at Univ. of Arizona in Jan – Mar 2023 |

PUBLICATIONS

* = publication substantially based on work done as a graduate student Co-authors who are undergraduate and graduate student advisees or postdoctoral mentees are <u>underlined</u>.

Overview (Google Scholar):

Peer-reviewed ISI-publications: 63 Book chapters: 1 Conference proceedings: 3 Citations: 5150 h-index: 37 i-10 index: 53

Peer-reviewed journal articles:

2024:

(63) Jevsenak J, Buras A, **Babst F** (2024) Shifting potential for high-resolution climate reconstructions under global warming. *Quaternary Science Reviews* 325, 108468.

2023:

- (62) Gao S, Camarero JJ, **Babst F**, Liang E (2023) Global tree growth resilience to cold extremes following the Tambora volcanic eruption. *Nature Communications* 14, 6616.
- (61) Treydte K, Liu L, Padron RS, Martinez-Sancho E, **Babst F**, Frank DC, et al. (2023) Recent humaninduced atmospheric drying across Europe unprecedented in the last 400 years. *Nature Geoscience* 17, 58-65.
- (60) <u>Peters RL</u>, Steppe K, Pappas C, Zweifel R, **Babst F**, Dietrich L, von Arx G, et al. (2023) Daytime stomatal regulation in mature temperate trees prioritizes stem rehydration at night. *New Phytologist*, doi: 10.1111/nph.18964.
- (59) Zweifel R, Pappas C, <u>Peters RL</u>, **Babst F**, Balanzategui D, Basler D, et al. (2023) Networking the forest infrastructure towards near real-time monitoring A white paper. *Science of the Total Environment*, 872, 162167.
- (58) Klesse S, **Babst F**, Evans M, Hurley A, Pappas C, <u>Peters R</u> (2023) Drought legacies in tree growth are manifestation of ubiquitous biological memory, not physiological crisis. *Journal of Ecology*, 111, 1188-1202.

- (57) Dyola N, Sigdel SR, Liang E, **Babst F**, Camarero JJ, Aryal S, Chettri N, Gao S, Lu X, Sun J, Wang T, Zhang G, Zhu H, Piao S, Penuelas J (2022) Species richness is a strong driver of forest biomass along broad bioclimatic gradients in the Himalayas. *Ecosphere*, 13, e4107
- (56) Bodesheim P, **Babst F**, Frank DC, Hartl C, Zhang CS, Jung M, Reichstein M, Mahecha MD (2022) Predicting spatiotemporal variability in radial tree growth at the continental scale with machine learning. *Environmental Data Science* 1, e9.
- (55) Zuidema P, **Babst F**, Groenendijk P, Trouet V, et al. (2022) Dry-season climate variability is a major driver of tropical tree growth. *Nature Geoscience*, 15. 269-276.
- (54) Cabon A, Kannenberg SA, Arain A, **Babst F**, ..., <u>Wei J</u>, ..., et al. (2022) Cross-biome synthesis of source versus sink limits to tree growth. *Science*, 376, 758-761.
- (53) Kannenberg, SA, Cabon A, **Babst F**, Belmecheri S, Delpierre N, Guerrieri R, *et al.* (2022) Droughtinduced decoupling between carbon uptake and tree growth impacts forest carbon turnover time. *Agricultural and Forest Meteorology*, 322, 108996
- (52) Dorado-Linan I, Ayarzaguena B, **Babst F**, Xu G, Gil L, Battipaglia G, et al. (2022) Jet stream position explains regional anomalies in European beech forest productivity and tree growth. *Nature Communications* 13, doi: 10.1038/s41467-022-29615-8.
- (51) Gao S, Liang E, Liu R, **Babst F**, Camarero JJ, Fu YH, et al. (2022) An earlier start of the thermal growing season enhances tree growth in cold humid areas but not in dry areas. *Nature Ecology & Evolution*, doi: 10.1038/s41559-022-01668-4
- (50) Lu X, Liang E, **Babst F**, Camarero JJ, Büntgen U (2022) Warming-induced tipping points of Arctic and alpine shrub recruitment. *PNAS*, 119, e2118120119.
- (49) Salomon R, <u>Peters R</u>, Zweifel R, Sass-Klaassen U, Stegehuis A, Smiljanic M, Poyatos R, **Babst F** et al. (2022) The 2018 European heatwave led to stem dehydration but not to consistent growth reductions in forests. *Nature Communications*, 13, 1-11.
- (48) Evans MEK, De Rose RJ, Klesse S, Girardin MP, Heilman KA, Alexander MR, Arsenault A, **Babst F**, et al. 2022 Adding tree rings to North America's national forest inventories: An essential tool to guide drawdown of atmospheric CO₂. *BioScience*, biab119.

- (47) **Babst F**, Friend AD, <u>Karamichalaki M</u>, <u>Wei J</u>, von Arx G, Papale D, <u>Peters RL</u> (2021) Modeling ambitions outpace observations of forest carbon allocation. *Trends in Plant Science*, 26, 210-219.
- (46) Jeong J, Barichivich J, Peylin P, Haverd V, McGrath MJ, Vuichard N, Evans MN, **Babst F**, Luyssaert S (2021) Using the International Tree-Ring Data Bank (ITRDB) records as century-long benchmarks for global land-surface models. *Geosci. Model Dev.*, 14, 5891-5913.
- (45) Wang Y, Liang E, Lu X, Camarero JJ, **Babst F**, Shen M, Penuelas J (2021) Warming-induced shrubline advance stalled by moisture limitation on the Tibetan Plateau. *Ecography*, 44, 1-11.
- (44) Trotsiuk V, **Babst F**, Grossiord C, Gessler A, Forrester DI, Buchmann N, Schaub M, Eugster W (2021) Tree growth in Switzerland is increasingly constrained by rising evaporative demand. *Journal of Ecology*, doi: 10.1111/1365-2745.13712
- (43) Sigdel SR, Pandey J, Liang E, Muhammad S, **Babst F**, Leavitt SW, *et al.* (2021) No benefits from warming even for subnival vegetation in the central Himalayas. *Science Bulletin*, doi: 10.1016/j.scib.2021.06.005
- (42) Bose AK, Scherrer D, Camarero JJ, Ziche D, **Babst F**, Bigler C, *et al.* (2021) Climate sensitivity and drought seasonality determine post-drought growth recovery of Quercus petraea and Quercus robur in Europe. *Science of the Total Environment*, 784, 147222.
- (41) Szejner P, Belmecheri S, **Babst F**, Wright WE, Frank DC, Hu J, Monson RK (2021) Stable isotopes of tree rings reveal seasonal-to-decadal patterns during the emergence of a megadrought in the Southwestern US. *Oecologia*, doi: 10.1007/s00442/021/04916/9

(40) Lu X, Liang E, Wang Y, **Babst F**, Camarero JJ (2021) Mountain treelines climb slowly despite rapid climate warming. *Global Ecology and Biogeograpy*, 30, 305-315.

2020:

- (39) Klesse S, DeRose RJ, **Babst F**, Black BA, Anderegg LDL, Axelson J, *et al.* (2020) Continental-scale tree-ring-based projection of Douglas-fir growth: Testing the limits of space-for-time substitution. *Global Change Biology*, 26, 5146-5163.
- (38) Reyer CPO, Silveyra Gonzalez R, Dolos K, Hartig F, Hauf Y, Noack M, *et al.* (2020) The PROFOUND database for evaluating vegetation models and simulating climate impacts on European forests. *Earth System Science Data* 12, 1295-1320.
- (37) <u>Peters RL</u>, von Arx G, Nievergelt D, Ibrom A, Stillhard J, Trotsiuk V, <u>Mazurkiewicz A</u>, **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.
- (36) Trotsiuk V, Hartig F, Cailleret M, **Babst F**, Forrester DI, Baltensweiler A, et al. (2020) Assessing the response of forest productivity to climate extremes in Switzerland using model-data fusion. *Global Change Biology*, doi: 10.1111/gcb.15011

2019:

- (35) **Babst F**, Bouriaud O, Poulter B, Girardin, M, Frank DC (2019) Twentieth century redistribution in climatic drivers of global tree growth. *Science Advances*, 5, eaat4313.
- (34) Hudson AR, Alfaro-Sanchez R, **Babst F**, Belmecheri S, Moore DJP, Trouet V (2019) Seasonal and synoptic climatic drivers of tree growth in the Bighorn Mountains, WY, USA (1654-1983). *Dendrochronologia*, 58, 125633.
- (33) Schurman J, **Babst F**, Björklund J, *et al.* (2019) The climatic drivers of primary *Picea* forest growth along the Carpathian arc are changing under rising temperatures. *Global Change Biology*, 25, 3136-3150.
- (32) Lu X, Liang E, Wang Y, **Babst F**, Leavitt S, Camarero J (2019) Past the climate optimum: Recruitment is declining at the world's highest juniper shrublines on the Tibetian Plateau. *Ecology*, 100, e02557.
- (31) Wu X, Li X, Liu H, Ciais P, Li Y, Xu C, **Babst F**, et al. (2019) Uneven winter snow influence on tree growth across temperate China. *Global Change Biology*, 25, 144-154.

- (30) **Babst F**, Bodesheim P, Charney N, Friend A, Girardin M, et al. (2018) When tree-rings go global: Challenges and opportunities for retro- and prospective insight. *Quaternary Science Reviews*, 197, 1-20.
- (29) Marchand W, Girardin MP, Gauthier S, Hartmann H, Bouriaud O, **Babst F**, Bergeron Y (2018) Untangling methodological and scale considerations in growth and productivity trend estimates of Canada's forests. *Environmental Research Letters*, 13, 093001.
- (28) Seftigen K, Frank DC, Björklund J, **Babst F**, Poulter B (2018) The climatic drivers of NDVI and tree-ring based estimates of forest productivity are spatially coherent but temporally decoupled in Northern Hemispheric forests. *Global Ecology and Biogeography*, 27, 1352-1365.
- (27) Klesse S, **Babst F**, Lienert S, Spähni R, Joos F, Bouriaud O et al. (2018) A combined tree-ring and vegetation model assessment of European forest growth sensitivity to inter-annual climate variability. *Global Biogeochemical Cycles*, 32, 1226-1240.
- (26) Trouet V, **Babst F**, Meko M (2018) Recent enhanced North Atlantic Jet variability emerges from three century context. *Nature Communications*, 9, 180.
- (25) Wu X, Liu H, Li X, Ciais P, **Babst F**, Guo W, et al. (2018) Differentiating drought legacy effects on vegetation growth over the temperate Northern Hemisphere. *Global Change Biology*, 24, 504-516.

- (24) Alexander MR, Rollinson CR, **Babst F**, Trouet V, Moore DJP (2018) Relative influence of multiple sources of uncertainty on cumulative and incremental tree-ring-derived aboveground biomass estimates. *Trees Structure and Function*, 32, 265-276.
- (23) Zhang Z, **Babst F**, Bellassen V, Frank D, Launois T, Tan K, Ciais P, Poulter B (2018) Converging climate sensitivities of European forests between observed radial tree growth and vegetation models. *Ecosystems*, 21, 410-425.

2017:

- (22) **Babst F**, Poulter B, Bodesheim P, Mahecha M, Frank DC (2017) Improved tree-ring archives will support earth-system science. *Nature Ecology and Evolution*, 1, 1-2.
- (21) Montane F, Fox A, Arellano A, MacBean N, Alexander MR, Dye A, Bishop D, Trouet V, **Babst F**, et al. (2017) Evaluating the effect of alternative carbon allocation schemes in a land surface model (CLM4.5) on carbon fluxes, pools and turnover in temperate forests. *Geosci. Model Dev.*, 10, 3499-3517.
- (20) Pappas C, Mahecha MD, Frank DC, **Babst F**, Koutsoyiannis D (2017) Ecosystem functioning is enveloped by hydrometeorological variability. *Nature Ecology and Evolution*, 1, 1263-1270.
- (19) Belmecheri S, **Babst F**, Hudson AR, Betancourt JL, Trouet V (2017) Northern Hemisphere Jet position indices as diagnostic tools for climate and ecosystem dynamics. *Earth Interactions*, 21, 1-8.
- (18) Evans MEK, Falk DA, Arizpe A, Swetnam TL, **Babst F**, Holsinger KE (2017) Fusing tree-ring and forest inventory data to infer influences on tree growth. *Ecosphere*, 8, 1-20.

2016:

- (17) **Babst F**, Wright WE, Szejner P, Wells LP, Belmecheri S, Monson R (2016) Blue intensity parameters derived from Ponderosa pine tree rings characterize intra-annual density fluctuations and reveal seasonally divergent water limitations. *Trees Structure and Function*, 30, 1403-1415.
- (16) Belmecheri S, **Babst F**, Wahl ER, Stahle DW, Trouet T (2016) Multi-century evaluation of Sierra Nevada snowpack. *Nature Climate Change*, 6, 2-3.
- (15) Szejner P, Wright WE, **Babst F**, Belmecheri S, Trouet V, Leavitt S, Ehleringer J, Monson R (2016) Latitudinal gradients in tree-ring stable carbon and oxygen isotopes reveal differential climate influences of the North American Monsoon System. *JGR Biogeosciences*, 121, 1978-1991.
- (14) Charney N, **Babst F**, Poulter B, Record S, Trouet V, et al. (2016) Observed forest sensitivity to climate implies large changes in 21st century North American forest growth. *Ecology Letters*, 19, 1119-1128.

2015:

- (13) Creasman PP, Dean J, **Babst F** (2015) Eine Einführung in die Dendrochronologie für Ägyptologen. *Göttinger Miszellen*, 245, 49-66.
- (12) Rammig A, Wiedermann M, Donges JF, **Babst F**, von Bloh W, Frank DC, Thonicke K, Mahecha MD (2015) Coincidences of climate extremes and anomalous vegetation responses: comparing tree ring patterns to simulated productivity. *Biogeosciences*, 12, 373-385.
- (11) Frank D, Reichstein M, Bahn M, Frank DC, Mahecha M, Smith P, Thonicke K, van der Velde M, Vicca S, **Babst F**, et al. (2015) Effects of climate extremes on the terrestrial carbon cycle: concepts, processes and potential future impacts. *Global Change Biology*, 21, 2861-2880.

- (10) **Babst F**, Alexander R, Szejner P, Bouriaud O, Klesse S, et al. (2014) A tree-ring perspective on the terrestrial carbon cycle. *Oecologia*, 176, 307-322.
- (9) ***Babst F**, Bouriaud O, Alexander R, Trouet V, Frank DC (2014) Toward consistent measurements of carbon accumulation: A multi-site assessment of biomass and basal area increment across Europe. *Dendrochronologia*, 32, 153-161.

- (8) ***Babst F**, Bouriaud O, Papale D, Gielen B, Janssens IA, Nikinmaa E, et al. (2014) Above-ground woody carbon sequestration measured from tree rings is coherent with net ecosystem productivity at five eddy-covariance sites. *New Phytologist*, 201, 1289-1303.
- (7) Wu X, **Babst F**, Ciais P, Frank, DC, Reichstein M, Wattenbach M, et al. (2014) Climate-mediated spatiotemporal variability in the terrestrial productivity across Europe. *Biogeosciences*, 11, 3057-3068.
- (6) Nehrbass-Ahles C, **Babst F**, Klesse S, Noetzli M, Bouriaud O, et al. (2014) The influence of sampling design on tree-ring based quantification of forest growth. *Global Change Biology*, 20, 2867-2885.

2008-2013:

- (5) ***Babst F**, Poulter B, Trouet V, Tan K, Neuwirth B, Wilson R, et al. (2013) Site- and species-specific responses of forest growth to climate across the European continent. *Global Ecol Biogeo*, 22, 706-717.
- (4) ***Babst F**, Carrer M, Poulter B, Urbinati M, Neuwirth B, Frank DC (2012) 500 years of regional forest growth variability and links to climatic extreme events in Europe. *Envir. Res. Letters*, 7, 1-11.
- (3) *Wilmking M, Hallinger M, van Bogaert R, Kyncl T, **Babst F**, de Luis M, et al. (2012) Continuously missing outer rings in woody plants at their distributional margins. *Dendrochronologia*, 30, 213-222.
- (2) ***Babst F**, Esper J, Parlow E (2010) Landsat TM/ETM plus and tree-ring based assessment of spatiotemporal patterns of the autumnal moth (*Epirrita autumnata*) in northernmost Fennoscandia. *Remote Sensing of Environment*, 114, 637-646.

(1) **Babst F**, Müller RW, Hollmann R (2008) Verification of NCEP reanalysis shortwave radiation with mesoscale remote sensing data. *IEEE Geoscience and Remote Sensing Letters*, 5, 34-37.

Book chapters:

(1) Pappas C, Babst F, Fatichi S, Klesse S, Paschalis A, Peters RL (2023) A circumpolar perspective on the contribution of trees to the boreal forest carbon balance. In: Montoro Girona M, Morin H, Gauthier S, Bergeron Y (Editors) Boreal forests in the face of climate change – Sustainable Management. Springer Nature Switzerland AG, Cham, Switzerland (ISSN1574-0919).

Conference proceedings:

- (3) ***Babst F**, Bouriaud O, Frank DC (2012) A new sampling strategy for tree-ring based forest productivity estimates. ATR TRACE Proceedings 10 62-70.
- (2) **Babst F**, Frank D, Parlow E, Esper J (2010) Age and susceptibility of Fennoscandian mountain birch (Betula pubescens) towards insect outbreaks. ATR TRACE Proceedings 8, 26-32.
- (1) **Babst F**, Frank D, Buentgen U, Nievergelt D, Esper J (2009) Effect of sample preparation and scanning resolution on the blue reflectance of Picea abies. ATR TRACE Proceedings 7, 188-195.

Media coverage:

- 2023: UArizona Earth Dynamics Observatory, News of Feb 2023. Terrestrial LiDAR and tree-ring observation A perfect match: https://edo.arizona.edu/news/terrestrial-lidar-and-tree-ring-observation-perfect-match
- 2022: German Radio (Deutschlandfunk), "Forschung aktuell", interview with Jan Toltzmann on May 5. Jet stream impacts on European forest productivity.

PNAS, "Front Matter", interview with Amy McDermott on Mar 18. Published in July 2022 as: https://www.pnas.org/doi/10.1073/pnas.2209636119

2019: Foundation for Polish Science, "Latest News", interview with Slawomir Zagorski on Aug 22. On the Polish research landscape for foreigners.

Swiss Radio SRF4, interview with Jonathan Fisch on Jan 17. Climate change effects on global tree growth.

University of Arizona, "UA News", interview with Mari Jensen on Jan 16. Water, not temperature limits global forest growth as climate warms.