

1. Personal details

Surname: Launiainen **First names:** Jomi Jouko Samuli

Gender: Male, **Date of Birth:** 10.11.1978, **Nationality:** Finnish

ORCID: <https://orcid.org/0000-0001-6611-6573>

WoS Researcher ID: AAS-9180-2021

2. Education and degrees completed

01.05.2014 Title of Docent (Forest Meteorology and Hydrology), University of Eastern Finland, Finland

07.01.2011 Ph.D. (Meteorology), University of Helsinki, Finland

24.02.2006 M.Sc. (Meteorology), University of Helsinki, Finland

01.01.2021- Specialist vocational qualification in leadership and business management (ongoing), Luksia, Finland

3. Current position

01.09.2021– Principal Scientist, Natural Resources Institute Finland (LUKE)

4. Previous work experience

01.01.2016– 31.8.2021 Academy Research Fellow, LUKE

01.01.2015 – 31.08.2016 Senior researcher, LUKE

01.08.2010 – 31.12.2014 Senior researcher, Finnish Forest Research Institute

01.04.2006 – 30.06.2010 Doctoral student, University of Helsinki, Department of Physics

01.01.2004 – 28.02.2006 Research assistant, University of Helsinki, Department of Physics

15.5.2002 - 15.09.2002 Research assistant, Finnish Marine Research Institute

6. Personal Research funding and grants

Research grants as the main applicant

- 1.9.2016-31.8.2021 Academy of Finland Academy Research Fellow (296116): Climate impacts of boreal bryophytes – from functional traits to global models (CLIMOSS), Academy of Finland (296116), 434 485€
- 1.9.2016-31.8.2019 Academy of Finland (307192), Academy Research Fellow research costs, 274 642€
- 1.9.2019-31.8.2021 Academy of Finland (327180), Academy Research Fellow research costs, 199 943€
- 1.4.2021-31.12.2022 LUKE strategic funding, Hydrology of Tropical Peatlands (HYDROPE) 180 000€
- Academy of Finland, Mobility grant Fin-Jpn joint seminar on the effects of climate change on ecosystem services 2019, 2 700€
- 01.01.2008-30.6.2010 Academy of Finland Centre Excellence program, Finnish Doctoral School full-time PhD-funding

Grants as consortium member

- 01.01.2020-31.12.2023 FORMAS, Sweden: Innovative modelling approaches for the identification of boreal forest management strategies under a changing climate (ForClimStress) to Giulia Vico,(SLU, Sweden), 542 000€

Significant role as co-applicant in funded proposals

- 9/2021-8/2024 Academy of Finland: Novel intra-molecular isotopic approach to infer past climate and plant responses from tree-ring archives (MoleO, no. 343059) to Katja Rinne-Garmston, LUKE 500 000€. Role: ecological modeling
- 2016-2017 Academy of Finland Advanced computational methodologies on open big data for forest terrain trafficability monitoring and forecasting (FOTETRAF) to Leena Finér (Luke) 297 632€. Role: Design of hydrological modeling & overall concept
- 2010-2013 Finnish Bioeconomy cluster FIBIC, Value through Intensive and Efficient Fibre Supply (EFFIBRE); PI Jari Hynynen, 320 000€

7. Leadership and supervision experience

Post-doc supervision

- Aura Salmivaara, 3/2016-4/2020 (now Researcher at Luke); forest machine trafficability and spatial analysis
- Antti-Jussi Kieloaho, 5/2017 – 5/2019 (now Senior Specialist at Luke), ecohydrological and physiological modeling and programming
- Mingfu Guan, 6/2017-6/2018 (Luke, currently Ass. Prof. at University of HongKong); spatial hydrological modeling
- Kersti Leppä, 12/2017-8/2020 (now Academy Post-Doctoral Fellow at Luke); ecohydrology of drained peatland forests; ecosystem modeling
- Pavel Alekseychik, 9/2018-, drone-based thermal and multispectral imaging for micrometeorological and ecological research

Ongoing PhD -supervision

- Toprak Aslan, 2/2019-, Biophysical and biogeochemical impacts of boreal forest thinning. University of Helsinki, Finland
- Jari-Pekka Nousu, 8/2020-, Modeling spatiotemporal hydrology at high-latitudes, University of Oulu, Finland

Project leadership

- PI of Luke's Ecosystem Modeling Lab and Academy Research Fellow Project CLIMOSS (9/2016-8/2021)
- sub-project PI TRAM (2021-) & ForClimStress (2020-)
- PI Trafficability Prediction and Route Planning for Forest Machines (TRAM, Academy of Finland 2021-) & ForClimStress (2020-)
- Coordinator of Luke's Eddy-Covariance and greenhouse gas infrastructure development project (2021-)

8. Teaching experience and pedagogical competence

Pedagogical training

- University pedagogics (10ETC, University of Helsinki, 2009)

Lectured courses

- Forest-Atmosphere Interactions (2008, University of Helsinki)
- Forest Soil Hydrology (2013, University of Eastern Finland, School of Forest Science)

Assistant / guest lecturer

- Forest-Atmosphere Interactions (2006); Boundary-layer physics I (2006, 2009); Boundary-layer physics II (2007); Principles in Environmental Physics I (2009); Impacts of silviculture on greenhouse gas emissions and biogeochemical cycles (2010)

9. Research outputs

- 70 peer-reviewed scientific articles, h-index 31, number of citations 2936 (Google Scholar, 13.1.2022)
- APES & pyAPES -ecosystem model open-source code
- SpaFHy, SpaFHy-Peat and NutSpaFHy -distributed hydrological model open-source codes
- KUSTAA -tool for estimating catchment-scale nutrient and sediment loading

10. Other key scientific or academic merits

- *Pre-examiner of doctoral theses*: Pekka Rantala, 2016 (Univ. Helsinki); Yao Gao, 2016 (Univ. Helsinki); Xin Jia, 2017 (Univ. Eastern Finland); Tom Kokkonen, 2019 (Univ. Helsinki)
- *Associate Editor* in Frontiers of Forests and Climate Change (Section Boreal and Temperate forests)
- *Reviewer* in peer-reviewed journals (2006-2021): Agricultural and Forest Meteorology, Atmospheric Environment, Biogeosciences, Canadian Journal of Forest Research Ecological Modeling, Environmental Modeling and Software, Forest Ecology and Management, Frontiers of Plant Science, Hydrological and Earth System Sciences, Journal of Ecology, Journal of Geophysical Research, Journal of Royal Society Interfaces, Nature Communications, Tellus, series B, Plant and Soil, Scandinavian Journal of Forest Research, Water Resources Research

11. Memberships and positions of trust in scientific societies

- Member of European Geoscientific Union 2017-