

CV

MOSISA TUJUBA WAKJIRA

PERSONAL INFORMATION

Date of Birth 09 Jan 1989
Nationality Ethiopia
Languages English, Oromic, Amharic, German (basic)
Marital status Married, two children
Work address ETH Zurich, Leopold-Ruzika-Weg 4, CH-8093 Zurich
Home address Bergacker 82, 8046 Zürich, Switzerland
Email 1 wakjira@ifu.baug.ethz.ch
Email 2 mosisatujuba@gmail.com

EDUCATION

Since 2019 Doctoral candidate in Environmental Engineering, ETH Zurich, Switzerland
Since 2019 Associated student in Science and Policy PhD program, Zurich-Basel Plant Science Center, Switzerland
2017 - 2018 MAS ETH in Sustainable Water Resources, ETH Zurich, Switzerland (Grade: 4.99/6.00)
2012 - 2014 MSc in Water Resources Engineering and Management, Hawassa University, Ethiopia (Grade: 3.97/4.00)
2007 - 2011 BSc in Agricultural and Biological Engineering, Haramaya University, Ethiopia (Grade: 3.60/4.00)

JOB EXPERIENCES

2019 - present Doctoral researcher at ETH Zurich. *Research project*: Climate change impacts on rainfed agriculture in Ethiopia

2014 - 2018 Lecturer at Ambo University, Ethiopia. *Major activities*: teaching bachelor courses (irrigation engineering, soil and water conservation, soil science, BSc thesis supervision). *Leadership role*: Head department of Agricultural Engineering (April 2016 – August 2017). *Adhoc committee roles*: BSc program curriculum development and evaluation committee, Scientific event (workshops and seminar) organizing committee..

2011 - 2012 Graduate assistant, Ambo University, Ethiopia. *Major activities*: Teaching assistance: Farm machineries and implements, and basic agricultural engineering courses.

AREA OF RESEARCH AND EXPERTISE

Hydrology, sustainable water resources management, irrigation and drainage, agrometeorology, climate change, drought and flood, water scarcity, crop-climate relations, soil-plant-water relations, geospatial analysis, remote sensing, agroecology, sustainability in water resources, vulnerability assessment, food security, sustainable development, science and policy

COMPUTATIONAL SKILLS, SOFTWARE AND MODELS

Matlab, R (basic), python (basic), LaTeX, ArcGIS, QGIS, AquaCrop, AWE-GEN 1D, Geospatial analysis, regression analysis, climate data analysis, climate downscaling, catchment and hydrological modeling

SCHOLARSHIP GRANTS

2019-2023 E4D Doctoral scholarship funded by Sawiris Foundation, ETH Zurich
2017-2018 Ouevri St-Justinus foundation scholarship for MAS ETH study of Sustainable Water Resources, ETH Zurich
2013-2014 DAAD In-country scholarship for study of MSc in Water Resources Engineering and Management, Hawassa University, Ethiopia

SCIENTIFIC MEMBERSHIP

- European Geoscience Union, EGU, since 2020
- International Association of Hydrological Sciences since 2022

PUBLICATIONS

a) Published

- **Wakjira, M.T.**, Peleg, N., Anghileri, D., Molnar, D., Alamirew, T., Six, J., Molnar, P., 2021. Rainfall seasonality and timing: implications for cereal crop production in Ethiopia. *Agric. For. Meteorol.* 310, 108633.
<https://doi.org/10.1016/j.agrformet.2021.108633>
- **Wakjira, M.T.**, Peleg, N., Burlando, P., Molnar, P., 2023. Gridded daily 2-m air temperature dataset for Ethiopia derived by debiasing and downscaling ERA5-Land for the period 1981-2010. *Data in Brief.* 46, 108844.
<https://doi.org/10.1016/j.dib.2022.108844>

b) In preparation

- **Wakjira, M.T.**, Peleg, N., Six, J., Molnar, P. Climate-driven changes in agroecological suitability for major cereal crops across the rainfed agricultural landscapes of Ethiopia. In prep for *Agriculture, Ecosystem and Environment*
- **Wakjira, M.T.**, Peleg, N., Six, J., Molnar, P. Climate sensitivity and changes in rainwater productivity across agricultural landscapes of Ethiopia. In prep for *Agricultural Water Management*

CONFERENCE CONTRIBUTIONS

Wakjira, M.T., Peleg, N., Johan Six, P., Molnar, P., Climate change impacts on rainwater productivity across agricultural landscapes of Ethiopia. <https://doi.org/10.5194/egusphere-egu23-2819>, 2023. EGU General Assembly 2023, 24–28 Apr 2023, EGU23-2819. PICO presentation, Vienna, Austria/ Virtual

Wakjira, M.T., Peleg, N., Molnar, D., Johan Six, P., Molnar, P., Climate change impacts on agroecological suitability for crops: an example from Ethiopia. 23rd Swiss Global Change Day, 19 Apr 2023. Poster presentation, Bern, Switzerland

Wakjira, M.T., Peleg, N., Burlando, P., Molnar, P., Changes in rainwater productivity across the rainfed agricultural areas in Ethiopia. 20th Swiss Geoscience Meeting, 18-20 November 2022, Lausanne, Switzerland, Oral presentation

Wakjira, M.T., Peleg, N., Anghileri, D., Molnar, D., Alamirew, T., Six, J., Molnar, P., The connections between rainfall regimes and crop production in semi-arid and sub-humid climates: an example from Ethiopia. <https://doi.org/10.5194/iahs2022-244>. International Association of Hydrological Science, IAHS Scientific Assembly 2022, 29 May – 03 June 2022. Oral presentation, Montpellier, France

Wakjira, M.T., Peleg, N., Molnar, P., Downscaling to high-resolution and correcting air temperature from the ERA5-Land over Ethiopia. <https://doi.org/10.5194/egusphere-egu22-11916>. European Geosciences Union, EGU 2022 General Assembly, 23–27 April 2022. Oral presentation, Vienna, Austria/ Virtual

Wakjira, M.T., Peleg, N., Molnar, D., Six, J., Molnar, P., Regularity of rainfall timing across Ethiopia: implications for crop production. <https://doi.org/10.5194/egusphere-egu21-9279>. European Geosciences Union, EGU 2021 General Assembly, 19–30 April 2021. Oral pitch, Virtual

REFEREES:

Prof. Dr. Peter Molnar
ETH Zürich
Institute of Environmental Engineering
Laura-Hezner-Weg 7
8093 Zürich, Switzerland
Email: peter.molnar@ifu.baug.ethz.ch

Prof. Dr. Johan Six
ETH Zürich
Institute of Agricultural Sciences
Universitätstrasse 2
8092 Zürich, Switzerland
Email: johan.six@usys.ethz.ch

Prof. Dr. Nadav Peleg
University of Lausanne
Institute of Earth Surface Dynamics
UNIL-Mouline, Geopolis
1015 Lausanne, Switzerland
Email: nadav.peleg@unil.ch