

Publications

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The sectioning is according to the classification by Ministry of Education and Culture. The ten most important publications are marked with a star (*). The DOI numbers are clickable in the pdf version.

A PEER-REVIEWED SCIENTIFIC ARTICLES

[1] M. Rwema, B. Safari, M. Laine, M. B. Sylla, L. Roininen: Trends and variability of temperatures in the eastern province of Rwanda *International Journal of Climatology*, e8793, 2025. [doi:10.1002/joc.8793](https://doi.org/10.1002/joc.8793)

[2] M. Rwema, M. B. Sylla, B. Safari, L. Roininen, M. Laine: Trend analysis and change point detection in precipitation time series over the eastern province of Rwanda during 1981–2021, *Theoretical and Applied Climatology*, **156**(2), pages 98, 2025. [doi:10.1007/s00704-024-05317-7](https://doi.org/10.1007/s00704-024-05317-7)

[3] K. Nilsen, R. Kivi, M. Laine, D. Poyraz, R. Van Malderen, P. von der Gathen, D. W. Tarasick, L. Thölix, N. Jepsen: Time-varying trends from Arctic ozonesonde time series in the years 1994–2022, *Scientific Reports*, **14**(1), pages 27683, 2024. [doi:10.1038/s41598-024-75364-7](https://doi.org/10.1038/s41598-024-75364-7)

[4] S. Bohlmann, M. Laine: Statistical calibration of probabilistic medium-range fire weather index forecasts in Europe. *Natural Hazards and Earth System Sciences*, **24**(12), pages 4225–4235, 2024. [doi:10.5194/nhess-24-4225-2024](https://doi.org/10.5194/nhess-24-4225-2024)

[5] Marko Laine, Gemma Kulk, Bror F. Jönsson, Shubha Sathyendranath: A machine learning model-based satellite data record of dissolved organic carbon concentration in surface waters of the global open ocean. *Frontiers in Marine Science - Ocean Observation*, **11**, 2024. [doi:10.3389/fmars.2024.1305050](https://doi.org/10.3389/fmars.2024.1305050)

[6] Anu Kauppi, Antti Kukkurainen, Antti Lipponen, Marko Laine, Antti Arola, Hannakaisa Lindqvist, Johanna Tamminen: A Bayesian framework to quantify uncertainty in aerosol optical model selection applied to TROPOMI measurements, **16**(11):1945, *Remote Sensing*, 2024. [doi:10.3390/rs16111945](https://doi.org/10.3390/rs16111945)

*[7] O. Rätty, M. Laine, U. Leijala, J. Särkkä, M. M. Johansson: Bayesian hierarchical modelling of sea-level extremes in the Finnish coastal region, *Natural Hazards and Earth System Sciences*, **2023**(23), pages 2403–2418, 2023. [doi:10.5194/nhess-23-2403-2023](https://doi.org/10.5194/nhess-23-2403-2023)

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[9] Zengmiao Wang, Peiyi Wu, Lin Wang, Bingying Li, Yonghong Liu, Yuxi Ge, Ruixue Wang, Ligui Wang, Hua Tan, Chieh-Hsi Wu, Marko Laine, Henrik Salje, Hongbin Song: Marginal effects of public health measures and COVID-19 disease burden in China: a large-scale modelling study, *PLOS Computational Biology*, **19**(9), 24 pages, 2023. [doi:10.1371/journal.pcbi.1011492](https://doi.org/10.1371/journal.pcbi.1011492)

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