

## Publications (updated May 2025)

**Jansen J.**, Weyhenmeyer G.A., Härkönen L.H., Prairie Y. & del Giorgio P. (2025) Divergent oxygen trends in ice-covered lakes driven by ice cover decline and ecological memory. Accepted for publication in *Proceedings of the National Academy of Sciences (PNAS)*.

Bernard, J., Saunois, M., Salmon, E., Peng, S., Berchet, A., Serrano-Ortiz, P., Gnanamoorthy, P., **Jansen, J.** & Ciais, P. (2025) Satellite-based modeling of wetland methane emissions on a global scale (SatWetCH4 1.0), *Geosci. Model Dev.*, 18, 863–883, doi:[10.5194/gmd-18-863-2025](https://doi.org/10.5194/gmd-18-863-2025).

Tan, Z., Yao, H., Melack, J., Grossart, H.-P., **Jansen, J.**, Balathandayuthabani, S., et al. (2024). A lake biogeochemistry model for global methane emissions: Model development, site-level validation, and global applicability. *Journal of Advances in Modeling Earth Systems*, 16, e2024MS004275. doi:[10.1029/2024MS004275](https://doi.org/10.1029/2024MS004275)

Hampton S.E., Powers S.M., Dugan H.A., Knoll L.B., McMeans B.C., Meyer M.F., O'Reilly C.M., Ozersky T., Sharma S., Barrett D.C., Chandra S., **Jansen J.**, McClure R.P., Rautio M., Weyhenmeyer G.A. & Yang X. Environmental and societal consequences of winter ice loss from lakes. *Science*, 386, eadl3211, doi:[10.1126/science.adl3211](https://doi.org/10.1126/science.adl3211)

**Jansen J.**, Weyhenmeyer G.A., Simpson G.L., Härkönen L.H., Prairie Y. & del Giorgio P. (2024) Climate-driven deoxygenation of northern lakes. *Nature Climate Change*, 14, 832–838. doi:[10.1038/s41558-024-02058-3](https://doi.org/10.1038/s41558-024-02058-3)

Kirchner N., Weckström J., **Jansen J.**, Schenk F., Barnett J., Granebeck A., Leppäranta M. & Korhola A. (2024) Water temperature, mixing and ice phenology in the arctic-alpine lake Darfáljávri (Lake Tarfala), northern Sweden, *Arctic, Antarctic, and Alpine Research*, 56(1), doi:[10.1080/15230430.2023.2287704](https://doi.org/10.1080/15230430.2023.2287704)

Xia, M. + 87 co-authors, including **J. Jansen**, (2023) Monitoring of carbon-water fluxes at Eurasian meteorological stations using random forest and remote sensing. *Sci. Data*, 10, 587, doi:[10.1038/s41597-023-02473-9](https://doi.org/10.1038/s41597-023-02473-9)

Guseva S., Armani F., Desai A.R., Dias N.L., Friborg T., Iwata H., **Jansen J.**, Lükő G., Mammarella I., Repina I., Rutgersson A., Scholz K., Spank U., Stepanenko V.M., Torma P., Vesala T. & Lorke A. (2023) Bulk Transfer Coefficients Estimated from Eddy-Covariance Measurements over Lakes and Reservoirs, *Journal of Geophysical Research: Atmospheres*, 128, doi: [10.1029/2022JD037219](https://doi.org/10.1029/2022JD037219)

Yuan K, Zhu Q., Li F., Riley W.J., Torn M., Chu H., McNicol G., Chen M., Knox S., Delwiche K., Wu H., Baldocchi D., ... **Jansen J.**, ... Jackson R. (2022) Causality guided machine learning model on wetland CH<sub>4</sub> emissions across global wetlands, *Agricultural and Forest Meteorology*, 324(6):109115, doi:[10.1016/j.agrformet.2022.109115](https://doi.org/10.1016/j.agrformet.2022.109115)

Woolway R.I., Denfeld B., Tan Z., **Jansen J.**, Weyhenmeyer G.A. & La Fuente S. (2022), Winter inverse lake stratification under historic and future climate change. *Limnol. Oceanogr. Lett*, 7, 302–311, doi:[10.1002/lol2.10231](https://doi.org/10.1002/lol2.10231)

Weyhenmeyer G.A., Obertegger U., Rudebeck H., Jakobsson E., **Jansen J.**, Zdrovennova G., Bansal S., Block B.D., Carey C.C., Doubek J.P., Dugan H., Erina O., Fedorova I., Fischer J.M., Grinberga L., Grossart H.-P., ... & Zdrovennov R. (2022) Towards critical white ice conditions in lakes under global warming, *Nature Communications*, 13, 4974, doi:[10.1038/s41467-022-32633-1](https://doi.org/10.1038/s41467-022-32633-1)

**Jansen J.**, Woolway R.I., Kraemer B.M., Albergel C., Bastviken D., Weyhenmeyer G.A., Marcé R., Sharma S., Sobek S., Tranvik L.J., Perroud M., Golub M., Moore T.N., Råman Vinnå L., La Fuente S., Grant L., Pierson D.C., Thiery W. & Jennings E. (2022) Global increase in methane production under future warming of lake bottom waters. *Global Change Biology*, 28, 5427–5440, doi: [10.1111/gcb.16298](https://doi.org/10.1111/gcb.16298)

**Jansen J.**, MacIntyre S., Barrett D., Chin Y., Cortés A., Forrest A., Hrycik A., Martin R., McMeans B., Rautio M. & Schwefel R. (2021) Winter limnology: how do hydrodynamics and biogeochemistry shape unique ecosystems under ice? *Journal of Geophysical Research: Biogeosciences*. 126. doi:[10.1029/2020JG006237](https://doi.org/10.1029/2020JG006237)

Bolduc B., Hodgkins S.B., Varner R.K., Crill P.M., McCalley C.K., Chanton J.P., Tyson G.W., Riley W.J., Palace M., Duhaime M.B., Hough M.A., IsoGenie Project Coordinators, IsoGenie Project Team (**Jansen J.**), A2A Project Team, Saleska S.R., Sullivan M.B. & Rich V.I. (2020) The IsoGenie database: an interdisciplinary data management solution for ecosystems biology and environmental research. *PeerJ* 8:e9467, doi:[10.7717/peerj.9467](https://doi.org/10.7717/peerj.9467)

Seco R., Holst T., Sillesen Matzen M., Westergaard-Nielsen A., Li T., Simin T., **Jansen J.**, Crill P.M., Friborg T., Rinne J. & Rinnan R. (2020) Volatile Organic Compound fluxes in a subarctic peatland and lake. *Atmospheric Chemistry and Physics*. 20, 13399–13416. doi:[10.5194/acp-20-13399-2020](https://doi.org/10.5194/acp-20-13399-2020)

**Jansen J.** (2020) *Carbon trace gas dynamics in subarctic lakes*. [PhD Dissertation] Department of Geological Sciences, Stockholm University, Sweden. [ISBN 978-91-7797-946-3](https://doi.org/10.1007/978-91-7797-946-3)

**Jansen J.**, Thornton B.F., Wik M., MacIntyre S. & Crill P.M. (2020) Temperature proxies as a solution to biased sampling of lake methane emissions. *Geophysical Research Letters*, 47. doi:[10.1029/2020GL088647](https://doi.org/10.1029/2020GL088647)

**Jansen J.**, Thornton B.F., Cortés A., Snöälav J., Wik M., MacIntyre S. & Crill P.M. (2020) Drivers of diffusive CH<sub>4</sub> emissions from shallow subarctic lakes on daily to multi-year timescales. *Biogeosciences*, 17, 1911-1932. doi:[10.5194/bg-17-1911-2020](https://doi.org/10.5194/bg-17-1911-2020)

**Jansen J.**, Thornton B.F., Jammot M.M., Wik M., Cortés A., Friborg T., MacIntyre S. & Crill P.M. (2019) Climate-Sensitive Controls on Large Spring Emissions of CH<sub>4</sub> and CO<sub>2</sub> From Northern Lakes, *Journal of Geophysical Research: Biogeosciences*, 124, 2379-2399. doi:[10.1029/2019JG005094](https://doi.org/10.1029/2019JG005094)

Sapart C.J., Shakhova N., Semiletov I., **Jansen J.**, Szidat S., Kosmach D., Dudarev O., van der Veen C., Egger M., Sergienko V., Salyuk A., Tumskey V., Tison J. & Röckmann T. (2017) The origin of methane in the East Siberian Arctic Shelf unraveled with triple isotope analysis, *Biogeosciences*, 14, 2283-2292. doi:[10.5194/bg-14-2283-2017](https://doi.org/10.5194/bg-14-2283-2017)

**Jansen J.** & Heymsfield A.J. (2015) Microphysics of aerodynamic contrail formation processes, *Journal of the Atmospheric Sciences*, 72, 3293-3308. doi:[10.1175/JAS-D-14-0362.1](https://doi.org/10.1175/JAS-D-14-0362.1)