



*quaternary*

an Open Access Journal by MDPI



## Annually Laminated Lake Sediments

Guest Editors:

**Prof. Dr. Bernd Zolitschka**

Institute of Geography, University of Bremen, Geomorphologie und Polarforschung (GEOPOLAR), Bremen, Germany

**Prof. Dr. Wojciech Tylmann**

Institute of Geography, University of Gdańsk, Gdańsk, Poland

Deadline for manuscript submissions:

**closed (15 May 2019)**

### Message from the Guest Editors

Annually-laminated lake sediments (varves) provide high-resolution sedimentary records with precise incremental time control in calendar years and offer time-series of biological, isotopic, geochemical and sedimentological parameters. Their analysis provides (1) climate reconstructions linked to hydroclimatic conditions and temperature, (2) information on natural disasters, and (3) increase our understanding of anthropogenic impacts, such as soil erosion, pollution and eutrophication. Varves document frequencies and rates of change for environmentally relevant processes and enhance our understanding of sedimentary processes when applied together with sediment trapping and instrumental monitoring.

This SI aims to present the diversity within the field and the state-of-the-art research on lake varves at all timescales and environments. It seeks to display a wide range of regional studies and methodological approaches, such as field and laboratory experiments, monitoring, image analysis and numerical modelling. We welcome manuscripts related to climate reconstruction, human impact and environmental monitoring, as well as improvements in geochronology and analytical techniques.



[mdpi.com/si/13046](https://mdpi.com/si/13046)

# Special Issue



# quaternary



an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Jef Vandenberghe

Department of Earth Sciences,  
VU University, De Boelelaan 1085,  
1081 HV Amsterdam, The  
Netherlands

## Message from the Editor-in-Chief

We live in a Quaternary world, that is, a world shaped by the interplay of the different compartments of the earth system—lithosphere, hydrosphere, atmosphere, biosphere, cryosphere—during the last ~2.6 million years. It is not possible to understand the current world—and, hence, to anticipate its possible future developments—without knowing the Quaternary history of drivers, processes, and mechanisms that have generated it. Our own species is an evolutionary outcome of the Quaternary performance. Therefore, the journal *Quaternary* is born with the aim of being an integrative journal to encompass all aspects of Quaternary science focused on understanding the complex world in which we live and to provide a sound scientific basis to anticipate possible future trends and inform environmental policies.

## Author Benefits

**Open Access :** free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

**High Visibility:** indexed within [Scopus](#), [ESCI \(Web of Science\)](#), [GeoRef](#), and [other databases](#).

**Journal Rank:** CiteScore - Q2 (Earth and Planetary Sciences (miscellaneous))

## Contact Us

*Quaternary* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/quaternary](http://mdpi.com/journal/quaternary)  
[quaternary@mdpi.com](mailto:quaternary@mdpi.com)  
[X@Quaternary\\_MDPI](#)