



## Geochronology of Palaeosols

J. van Mourik

University of Amsterdam, biodiversity and ecosystem dynamics (IBED), Science Park 904, 1098 XH Amsterdam,  
Netherlands (j.m.vanmourik@uva.nl)

Palaeosols are relevant geo-ecological archives. In polycyclic profiles, soil-ecological aspects can be registered during a geomorphologic stable phase in landscape evolution. To unlock this information various techniques are applied. Traditionally, soil-ecological fingerprints are obtained by pollen analysis. Also soil micromorphology, microbiology, as well as inorganic and organic soil chemistry provide relevant information. Problematic is the absolute dating of information from palaeosols. Due to the complexity of soil organic carbon, radiocarbon dating may be unsuitable for the development of a robust geochronology of palaeosols. In such cases, application of optically stimulated luminescence dating may provide an interesting alternative.

The aim of this presentation is to share the latest developments in research approach and techniques for unlocking geo-ecological information from palaeosols, to improve the geochronology and to contribute to the reconstruction of landscape evolution.

All researchers, involved in interdisciplinary palaeopedological studies and/or from other related disciplines are invited to contribute to the geochronology of palaeosols. Important elements for the future research are: (1) Techniques to unlock palaeo-ecological information from paleosols such as palynology, (organic) soil chemistry, archaeology; (2) Dating techniques to create a robust geochronological frameworks; (3) Reconstruction of impact of human land use on soil properties (the polygenetic aspects of soils).