



## 4-year PhD fellow position in Geomorphology/Paleoclimatology (2017-2021)

*Contrato predoctoral (4 años) para la formación de doctores en Geomorfología/Paleoclimatología*

### FluvPaleoRisk Project. 3000 years of flooding in mountain catchments: connectivity, synchronization or teleconnection? (CGL2016-75475-R)

The variation of surface hydrological conditions that determine the pattern of river systems, affects significantly environmental and socioeconomic systems and flood risk.

The project develops a multidisciplinary approach that contributes to the generation of long series of paleofloods in the Eastern Betic Range and Western Alps, that record also low-frequency extreme events. The approach analyzes fluvial sedimentary and lichenometric proxies, as well as instrumental data and documentary sources by applying geostatistical methods, climate modeling and remote sensing. The control mechanisms and forcings (orbital, solar, climate, volcanic, land use changes, geomorphological and hydrological dynamics) involved in fluvial processes of basins with different features (altitude, surface) will be analyzed.

The study aims to determine whether paleofloods can be attributed to warm or cool climate periods, higher or lower humidity, and to regional-scale synoptic situations. Furthermore, it investigates whether there is a synchronous or asynchronous response between basins such as differences of catchment connectivity, and if the altitude is a key factor because of the snow melt. The analysis of atmospheric circulation modes that have produced periods of higher flood frequency during the past millennium provides information on climate forcing mechanisms, possible correlations and teleconnections between catchments of the Betic Range - Western Alps transect.

**Contact PI / Contacto del IP:** Prof. Dr. Lothar Schulte, University of Barcelona, schulte@ub.edu

**Research Group Information / Información sobre el Grupo:** <http://www.palaeo.org/index.html>

**Participating institutions / Centros participantes:** University of Barcelona, Catalan Meteorological Survey, University of Berne, Catalan Institute of Cartography and Geology, Swiss Federal Institute for Forest, Snow and Landscape Research, University of Giessen.

**Applicants / Beneficiarios:** Graduate degree and preferentially with a Master's Degree in Physical Geography, Geology, Earth Sciences, Environmental Sciences, History or similar studies. The applicants must have a strong interest and previous experience in geomorphological fieldwork and in the processing, analysis and integration of paleoenvironmental datasets from geoarchives and historical sources. Good communication skills and excellent team spirit are a prerequisite. A good standard of written and spoken English is essential, as well as basic knowledge of German is welcome.

**Application deadline / Cierre de la presentación de solicitudes:** 18/Oct/2017 (15:00)

**Annual fellowship (before tax) / Ayuda anual (bruto):** 20.500 €/yr

**General information requests / Información para solicitudes:**

<http://www.idi.mineco.gob.es/portal/site/MICINN/menuitem.dbc68b34d11ccbd5d52ffeb801432ea0/?vgnnextoid=b96552ab45a7e510VgnVCM1000001d04140aRCRD&vgnnextchannel=11f35656ecfee310VgnVC M1000001d04140aRCRD>