

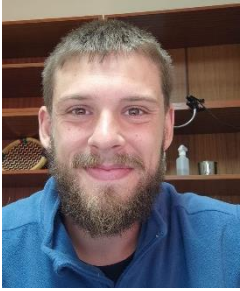
# IAG Webinar Southern Europe



1 March 2024 at 16:00 – 18:00 CET

Coordinators: Efthimios Karymbalis and Francisco Gutiérrez  
Harokopio Univ. (Greece) and Zaragoza Univ. (Spain)

16:00–16:15



## Active uplift in the Cardona salt diapir, NE Spain

*Guillermo Pérez, University of Zaragoza, Spain*

Upward salt flow in the Cardona diapir is recorded by halokinetic sequences in colluvial, fluvial and lacustrine flaps deposits, and by raised strath terraces of the Cardener River and a tributary drainage. In the strath terraces it's possible to obtain precise uplift rates, employing the relative height and the age of the radiocarbon dated deposits, getting rates ranging between 1.3 and 3.6cm/yr. Uplifting can be also recorded by DiNSAR technique, which provides really coherent data, with rates for this area of 1-1.5cm/yr.

## Coastal uplift in Westernmost Iberia: geomorphology and chronology of the Peniche marine terraces (Portugal)

*Margarida Porto Gouveia, University of Coimbra, Portugal*

This study provides a detailed geomorphological analysis of the Peniche Peninsula, located in the westernmost Iberian sector (Portugal), in a rocky limestone headland subjected to Atlantic Ocean coastal processes. A multidisciplinary approach was employed to: reconstruct styles and timing of paleoenvironmental changes, correlate to Marine Isotope Stages (MIS), and quantify coastal uplift rates during the Quaternary. Along the Peninsula's southwest sector, the marine terrace deposits were studied. The result of this research demonstrates that the Western Iberian Margin experiences low to moderate uplift rates, where active tectonics significantly influences the geomorphic expression and distribution of Pleistocene marine terraces.



16:15–16:30

16:30–16:45



## Metrics to investigate riverbed planform changes: insights from recent studies on some Italian rivers

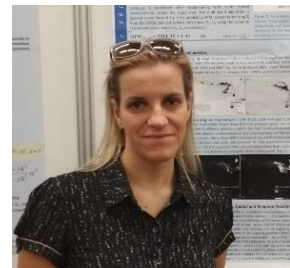
*Andrea Mandarino, University of Genova, Italy*

The analysis of medium- (25-250 years ago) and short-term (<25 years ago) riverbed morphological changes and their triggering factors allows to define the past morphological evolution of river systems, to correctly interpret the ongoing channel conditions, and to assess possible future trends. Therefore, it is essential for river management purposes. This talk focuses on GIS-based metrics for the quantitative assessment of riverbed planform adjustments.

## Assessing the risk of sea level rise on the beach tourism environments

*Aikaterini Karditsa, University of Athens, Greece*

Beach zones are highly dynamic environments, documented as the most vulnerable to climate change coastal ecosystems. Meanwhile, as beach zones are among the most valuable touristic, thus economic, resources, it is considerably important for beach tourism managers to provide an assessment of the potential risk upon the touristic beaches. A three-step risk assessment approach in the Ionian Islands (Greece) integrates beach (i) hazard due to sea level rise, (ii) exposure with regard to touristic exploitation, and (iii) vulnerability considering morphological characteristics. The results indicate a great heterogeneity in risk and support development of proper adaptation strategies.



16:45–17:00

17:00–17:15



## Centennial, annual, and seasonal activity of sedimentary processes on alpine alluvial fans in the Planica Valley, NW Slovenia

*Andrej Novak, Geological Survey of Slovenia, Slovenia*

A perfect natural laboratory for studying complex Holocene sedimentary processes on fans is the Planica Valley in NW Slovenia. Current research focuses on detailed sedimentary analysis of alluvial fan deposits, dating of sedimentary processes using <sup>14</sup>C and dendrogeomorphological methods, monitoring depositional activity using UAV and linking dated depositional events to the precipitation records. The results of the past seven years of research show a reconstruction of complex alluvial fan sedimentation and erosion activities on different temporal scales, which are related to the bedrock geology and to triggering precipitation events.

## Agricultural land use changes as a driving force of soil erosion in the Velika Morava river basin, Serbia

*Tanja Srejić, Research Associate, University of Belgrade, Serbia*

The erosion potential model was applied to estimate the soil erosion status of rural settlements during the years 1971 and 2011. We used univariate and bivariate local Moran's I indices to detect and visualize the spatial clustering of settlements with respect to changes in erosion intensity and agricultural land use, as well as their mutual spatial correlation.



17:15–17:30

INTERNATIONAL GEOMORPHOLOGY WEEK 2024



# IAG Webinar Southern Europe

1 March 2024 at 16:00 – 18:00 CET

Coordinators: Efthimios Karymbalis and Francisco Gutiérrez  
*Harokopio Univ. (Greece) and Zaragoza Univ. (Spain)*

17:30–17:45



## Evolution of pocket beaches on the island of Hvar over last two centuries (Central Adriatic, Croatia)

*Marin Mićunović, University of Zagreb, Croatia*

Many beaches worldwide are affected by erosion process, which is related to both, human impact and recent climate change-related processes. In order to better understand the erosion process and estimate future beach evolution, it is necessary to study the processes that have affected beaches in the past. This contribution will present the evolution of 30 pocket beaches over the last two centuries. The analysis is conducted by integrating fieldwork measurements, remote sensing methods (UAV, satellite imagery, and State orthophotos), and archival materials (including the 1834 Franciscan Cadastre, old photographs, and 1950s State orthophotos).

INTERNATIONAL GEOMORPHOLOGY WEEK 2024