



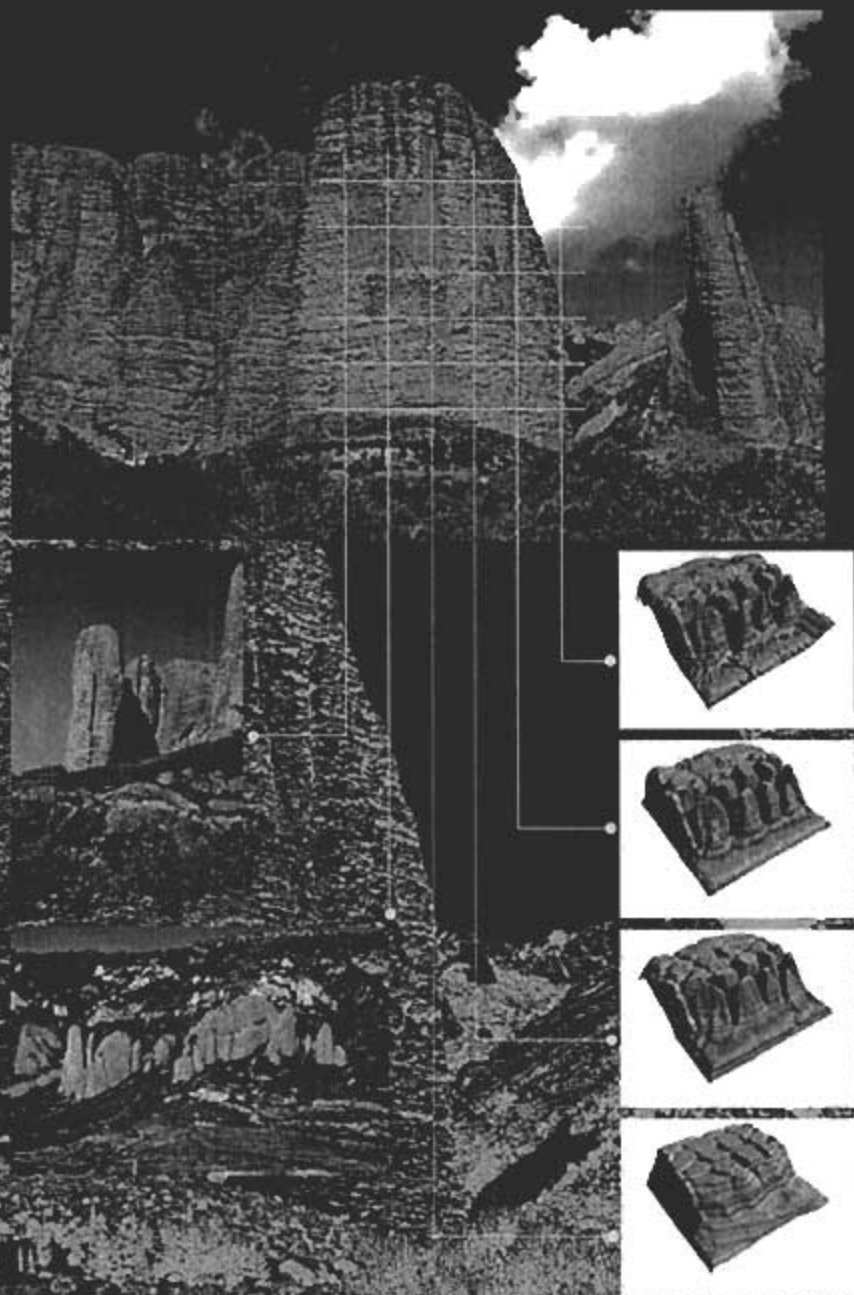
THE INTERNATIONAL ASSOCIATION OF GEOMORPHOLOGISTS

# SIXTH INTERNATIONAL CONFERENCE ON GEOMORPHOLOGY

GEOMORPHOLOGY IN REGIONS OF ENVIRONMENTAL CONTRASTS

SEPTEMBER 7-11, 2005 ZARAGOZA (SPAIN)

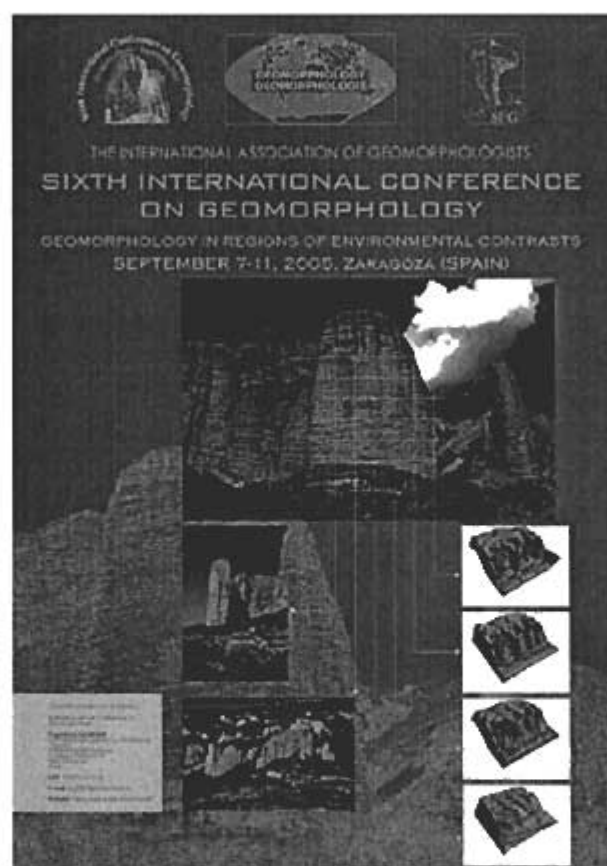
## Abstracts Volume



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## Abstracts volume

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# The Teide – Pico Viejo volcanic complex and NW rift-zone of Tenerife: volcanic evolution and hazard assessment (Canary Islands)

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The island of Tenerife is located in the central part of the hotspot-induced Canarian archipelago and represents the early rejuvenated stage of volcanic evolution. The Upper Pleistocene and Holocene volcanism of Tenerife was concentrated on a central volcanic complex (Pico del Teide and Pico Viejo twin volcanoes) nested to a northeast and a northwest rift-zone (NWRZ). Most of the central prehistoric and historic eruptions were not directly related to the Teide volcano, which apparently had only one eruption in the last 20 ka (about  $1,240 \pm 60$  years BP), but to flank parasitic vents producing thick phonolitic flows. Most of the fissural Holocene eruptions (mostly basalts and basanites) occurred along the NWRZ. Our methodology to assess the volcanic hazard in Tenerife is based upon: (1) New <sup>14</sup>C and K/Ar ages of the Teide – Pico Viejo complex and NWRZ, (2) Detailed mapping of the lava flows and eruptive centres using a GIS software, (3) Geochemistry and morphology of the lava flows, related to eruptive mechanisms, (4) Geoarcheology, considering that the early human settlement of Tenerife has undergone volcanic eruptions, (5) Mapping of the lava inundation zones and predicted paths of lava flows using a DEM software, (6) Mapping of the volcanic risks, vulnerability and volcanic hazards. Our results will be compared with previous studies in hazard assessment, such as remote sensing, seismic, gas, geodetic, gravity and electromagnetic monitoring.

**Keywords:** *Stratovolcano, Rift-zone, Volcanic hazard assessment and mapping*

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