



Tectonics, sedimentation and surface processes (sponsored by IAS)

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Aims & Scope

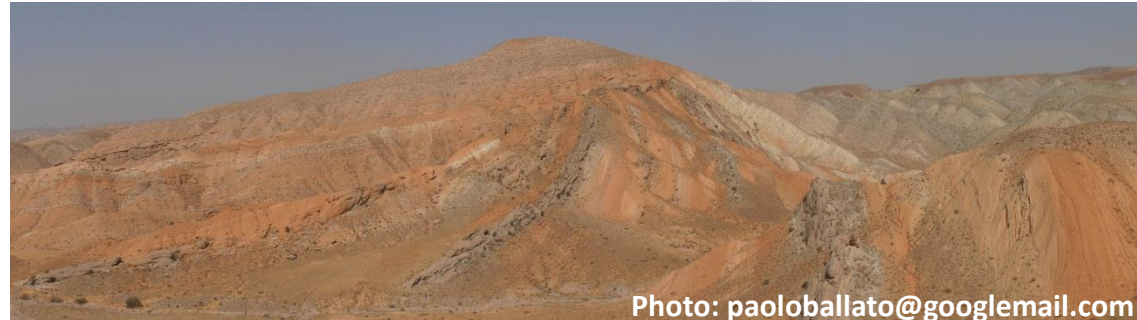


Photo: paoloballato@googlemail.com

The sedimentary record has long been used to invert for deformation at all scales and in all tectonic settings. Growth strata, sediment provenance, sequence stratigraphy and changing depositional environments for instance have all provided first order constraints on quantifying deformation. At the same time, these studies have motivated much work on the influence of tectonics on patterns of sedimentation and basin filling successions. Recently, however, the development of new methods to quantify the rates of surface processes in the upstream erosion and transfer zones, as well as revived interest in the couplings between surface processes, tectonics and climate, has made it possible to renew our understanding of the interactions between sedimentation and tectonics within the framework of the whole integrated sediment routing system.

In this session we are looking for studies that integrate both sedimentation and surface processes to understand deformation, and for studies of the interactions between basin or upland tectonics and the sedimentary system of erosion, transport and deposition. In particular, we encourage recent studies of growth strata, coupled catchment-basin studies that take advantage of new numerical/physical modeling methods, geochemical tools for quantifying rates of surface processes (TCN, A-ZFT, OSL...) and high resolution digital topographic and subsurface data. We also encourage field or subsurface sedimentological and structural studies of growth relationships, sedimentary patterns and provenance in deformed settings, and investigations of the role of surface processes on rates of deformation and tectonic style.

Important Links

<http://meetingorganizer.copernicus.org/EGU2012/session/10198>

(deadline 17 January 2012, 24:00 CET)