



IAG Regional Conference 2015, Barnaul (Russia).

Working Group Tectonic Geomorphology

Session proposal: *Catastrophism and Gradualism in Tectonic Geomorphology*

Understanding the mechanisms that drive the interactions between Earth's endogenous and surface processes, as well as their mutual feedback relationships, is the topic of a wide scientific community. These interactions and feedback relationships can be approached at diverse space and time scales, depending on the final research purposes. When focusing on the hazardous phenomena induced by active tectonics (e.g. earthquakes, volcanic events, fault ruptures, and slope instability, among others) the complex interactions between regional and local tectonics (regional uplift/subsidence and local faulting), morpho-climatic factors, and rock types must be taken into account. Multidisciplinary approaches involving geomorphologists, sedimentologists as well as Quaternary-structural-and engineering geologists is auspicious for developing qualitative and quantitative tools for deciphering the influence of tectonics in shaping landscapes at different spatial and temporal scales and for defining tectonic history through the analysis of erosional and depositional surface processes. Given the recent growth of new tools and perspectives (e.g., quantitative and object-based geomorphology, geodesy, improved chronological techniques, numerical modeling, quantitative stratigraphy), this session is aimed at presenting and promoting multidisciplinary and innovative studies on Tectonic Geomorphology in different geodynamic contexts. Contributions focusing on distinctive space and time scales are welcome: we encourage regional- to basin-scale studies, deciphering the long-term geomorphological evolution related to mantle and deep crustal activity, as well as basin- to slope-scale researches, decoding short-term, even catastrophic, morpho-evolutionary contexts. Importance will be given to advanced and original researches including: morpho-stratigraphic characterization and dating of geomorphic markers; development of geostatistical and geomorphic tools to detect active tectonic structures; calibration and integration of quantitative methods to estimate uplift, erosion and deposition rates; landscape evolution modeling; analysis of the effects of morpho-evolutionary rates on large slope instability events.

Chairs: Dott. Francesco TROIANI (Department of Earth Science Sapienza University of Rome, Italy); Prof. Efthimios KARYMBALIS (Department of Geography Harokopio University; Greece); Dott. Ahmad BASHIR (Department of Geology, Sri Pratap School, India).