Can topography reveal the nature, rates and trajectory of landscape change?

Seminario
Data: Monday, 17 March, 2014 - 16:30 - 17:30
Relatore: Simon M. Mudd
Abstract:

For over a century geoscientists have reasoned that the morphology of the landscape could reveal information about its dynamic behaviour. In the last decade an explosion in the availability, spatial coverage and resolution of remotely sensed topographic data has radically improved our ability to test theories of landscape evolution against measurements. In this talk I examine how new topographic analysis techniques on both hillslopes and rivers are helping to reveal the rates, mechanisms and time evolution of landscapes. Specifically I will examine how metrics of relief and topographic curvature can be combined to deduce if landscapes are growing or decaying, possibly in response to tectonic activity, and will describe a new channel analysis technique that can be used to resolve fluvial incision processes in tectonically active landscapes.
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