3D MODELLING OF NATURAL FEATURES AND REMOTE SENSING OF LANDSLIDES
SPAMLAB-USP ACTIVITIES AND POTENTIAL COLLABORATIONS

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The Spatial Analysis and Modelling Lab (SPAMLab-USP) was created about ten years ago, to gather people interested in spatial analysis from all backgrounds, in a discrimination-free environment. So far, we have had students from Geology, Geography, Oceanography and Forest Engineering. This talk will present some of the research carried out in SPAMLab, hoping to spark discussions and future collaborations. Examples will be shown of LiDAR mapping of caves and coastal dunes, Structure from Motion-Multi View Stereo (SfM-MVS) 3D modelling of caves, dunes and landslides, and a few applications of Machine Learning/Deep Learning to landslide scar mapping.

Carlos Grohmann is an Associate Professor of Geotechnologies at the Institute of Energy and Environment of the University of São Paulo, Brazil, where he runs the Spatial Analysis and Modelling Lab (SPAMLab). His research interests include Digital Terrain Analysis (Geomorphometry), DEMs, GIS, UAVs, LiDAR, Landslides, Remote Sensing, Free Software (FOSS), Morphotectonics/Neotectonics, and Karstic Systems.

SPAMLab performs all kinds of Spatial Analysis, including GIS, Remote Sensing and Digital Terrain Analysis. Current projects include: applications of UAVs (Unmanned Aerial Vehicles, or drones) and Terrestrial Laser Scanner (TLS, LiDAR) in characterizing features of geological or geomorphological interest, such as 3D modelling of caves, landslides, dune fields or geological structures in outcrops (dikes, fractures, faults, etc.); restoration of deforested areas and evaluation of hydroelectric power plants impact on the environment.

Ore 11:00 – mercoledì 8 maggio – CNR IRPI – v. Madonna Alta, 126