



Terrestrial digital photogrammetry and Laser Scanner: analysis of the quantitative morfolodynamic in the Miage Valley (Mont Blanc)

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The present work is developed in the “MIAGEO” International Research Project (GeoSITLab, DST of Torino - Laboratoire Edytem, Université de Savoie, Chambéry - DITAG, Politecnico di Torino). In order to understand the evolution of the rock slope dynamic in an high altitude glacial basin (like the Miage basin area), GeoSITLab is carrying out a series of surveys in field, applying new geomatic approach. In the past the traditional geostructural and geomorphological surveys highlighted how the rock falls phenomena were strictly connected with geological features and how these phenomena are able to conditioning the Miage glacier's dynamic. The analysis of the morphostructural conditions of the rock walls has been faced through the experimentation of photogrammetrical techniques (digital terrestrial photogrammetry). The digital images taken have been oriented in laboratory, where it's possible to try the identification of the geometric parameters of rock wall. Moreover a Laser Scanner surveys has been carried out in the glacial basin, on a particular sector of the right orographic side, chosen “ad hoc” for the steep, articulated morphology and for the litostructural features. The analysis of the geometrical parameters of the rock fractures has been developed through the treatment of the points cloud generated by Laser. Different softwares have been utilized for this operation (like Riscan Pro and LSR2004) and a morphostructural characterization of the rock walls has been obtained and compared with the photogrammetrical one.