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Cultural Heritage: An example of graphical documentation with automated photogrammetric systems

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Abstract. In the field of Cultural Heritage, the use of automated photogrammetric systems, based on *Structure from Motion* techniques (SfM), is widely used, in particular for the study and for the documentation of the ancient ruins. This work has been carried out during the PhD cycle that was produced the "Carta Archeologica del territorio intorno al monte

Massico". The study suggests the archeological documentation of the mausoleum "Torre del Ballerino" placed in the south-west area of Falciano del Massico, along the Via Appia. The graphic documentation has been achieved by using photogrammetric system (Image Based Modeling) and by the classical survey with total station, Nikon Nivo C. The data acquisition was carried out through digital camera *Canon EOS 5D Mark II with Canon EF 17– 40 mm f/4L USM @ 20 mm* with images snapped in RAW and corrected in *Adobe Lightroom*. During the data processing, the camera calibration and orientation was carried out by the software Agisoft Photoscans and the final result has allowed to achieve a scaled 3D model of the monument, imported in software *MeshLab* for the different view. Three orthophotos in *jpg* format were extracted by the model, and then were imported in AutoCAD obtaining façade' s surveys.

[Conference Paper](#) (PDF, 845 KB)

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