

# **The survey of the Dome of the Basilica of San Vitale in Ravenna**

**Grazia Tucci , Nora Lombardini , Valentina Bonora , Nadia Guardini , Paolo Focaccia**

**Abstract**            The aim of this research is to study in depth the geometry of the Basilica of San Vitale in Ravenna to obtain more information for a conservative project of this monument, which is one of the most representative buildings of the VI Century AD and whose mosaics are inscribed on the UNESCO list. The dome of the basilica has been built with a constructive system employing clay tubes, well known in the ancient Roman period and adopted for buildings of Northern Africa and Italy. In the Nineties of the last Century surveys and researches revealed a few particularities in the geometry which today can be better studied thanks to new methods and instruments. One of the goals of this research is to study the geometry of the dome; data collected with 3D scanning has been processed to create a surface model of the intrados and of the extrados, in order to better understand how the dome was built.

**Keywords**            Geomatics, Survey, Laser Scanning, Conservation, Constructive Systems