e-Cathedral:
On the digital archiving of the largest medieval Gothic church of France

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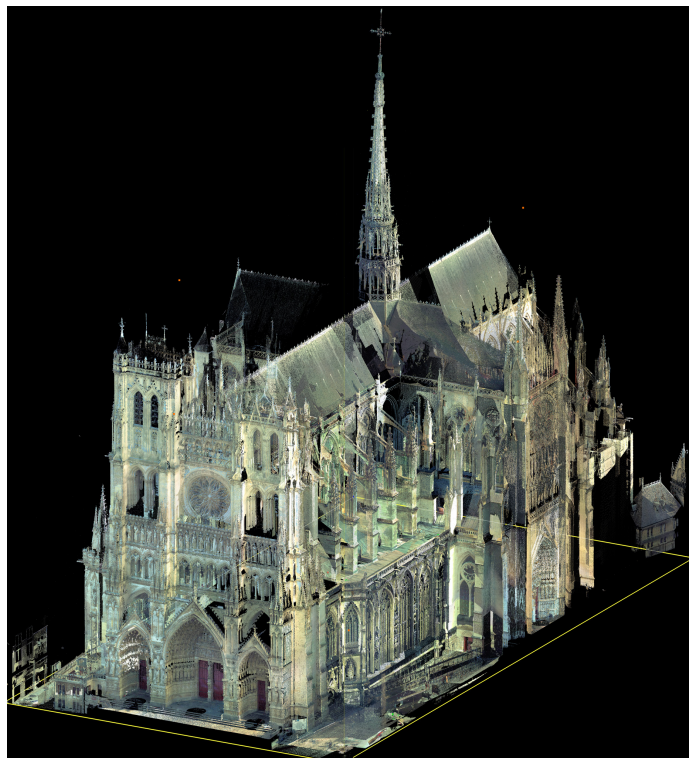Université de Picardie Jules Verne – MIS lab, Amiens, France
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The E-Cathedral research program was born in the context of cultural heritage preservation. It is dedicated to the full digitization of the cathedral of Amiens, in France, to get a model the closest to reality. This heritage building is the highest complete Gothic cathedral built in the Middle Ages (XIIIth Century) and is considered a UNESCO world heritage since 1981.

E-Cathedral was launched at fall 2010 for fifteen years and this talk gives an overview of digitization results obtained during its first six years of existence. Getting a precise 3D geometry and high definition colors of the heritage building is presented through digitization tools and computer vision research works.

Furthermore, the use of the model is another important target of this multidisciplinary program merging geographical surveying, information technologies, robotics, history of art and architecture. Some applications in these fields will be highlighted, as the interactive visualization of hundreds of millions of 3D points on a smartphone, assistive virtual camera control for tour and the first actual map of the cathedral of Amiens.

Core contributors to this invited talk content: E. Mouaddib, Professor, D. Groux-Leclet, PhD, N. Crombez, PhD and Z. Habibi, PhD.

The Gothic cathedral of Amiens: a photo of its western façade on the left side and an isometric view of its 3D digital model on the right.