



LECTURE

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The iron skeleton of Notre-Dame de Paris

An archaeometallurgical perspective

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ABSTRACT

Research carried out over the past 20 years has shown that iron armatures were used in the construction of the great Gothic monuments and had a variety of functions, from holding up stained glass windows to stabilising masonry on a temporary or permanent basis. The fire of cathedral Notre-Dame de Paris in 2019 brought to light iron reinforcements hitherto unknown in its structure. Beyond the archaeological inventory that is mandatory before any study, the chemical and metallographic analysis of these iron alloys sheds new light on the practices of medieval and modern builders. This presentation will review 20 years of studies of medieval and modern building irons, centered on the case of Notre-Dame de Paris, looking at the nature and quality of the alloys, their forging and the technical processes used, the supply of metal to the building site, but also the chronology of these reinforcements. The results obtained provide new elements for understanding the construction and consolidation of the building in its architectural context.



BRIEF CV

Maxime L'Héritier is an archaeologist and historian specialized in construction history and archaeometallurgy. His works deal with metal production and trade in the Middle Ages as well as constructive techniques, with a material and economic approach of great medieval building yards. He received his Ph.D. on "the use of metal in gothic architecture" from the University of Paris 1 Panthéon-Sorbonne in 2007 and is currently an Associate Professor at the University of Paris 8 Vincennes-Saint-Denis and ArScAn CNRS laboratory. In 2019, he coedited a book on ancient building maintenance and long-term conservation practices "Sarta Tecta. De l'entretien à la conservation des édifices, Antiquité, Moyen Âge, début de la période modern". Since May 2019, he coordinates the "Metal Workgroup" for the scientific project on Notre-Dame de Paris, funded by the CNRS (French National Scientific Research Center) and French Ministry of Culture.