



Preventive  
Conservation  
in Historic Houses  
and Palace  
Museums:  
Assessment  
Methodologies  
and Applications

SilvanaEditoriale

# **Preventive Conservation in Historic Houses and Palace Museums: Assessment Methodologies and Applications**

Conference of the National Museum of the Palace of Versailles (EPV), the Association of European Royal Residences (ARRE), and the Research Centre of the Palace of Versailles (CRCV)

In collaboration with the International Committee for Historic House Museums (DEMHIST), held at the National Museum of the Palace of Versailles and Trianon

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## **Conference Proceedings**

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# Mechanical Research Applied to Preventive Conservation – What Next?

## **Abstract**

Despite indisputable developments in the understanding of the mechanical behavior of heritage objects in response to their environment, several significant gaps in this knowledge still exist. This article aims to identify some of these gaps and suggest future applications of mechanical research to optimize preventive conservation approach with pragmatic risk assessment. The presentation focuses on gaps in knowledge that create barriers in the development of meaningful models for risk assessment and risk management of heritage collections. There is a lack of adequate models to assess the risk of mechanical damage caused by extreme but rare climate variations and to predict the rate of mechanical damage caused by a large number of moderate RH cycles. Also, more research needs to be done to understand crack saturation process in paint layers which might give new insight into common observation of curators and conservators-restorers that objects survived remarkably well in environments far from ideal museum conditions.

The absence of these models and thorough understanding of crack saturation have impeded progress towards a consensus on museum standards with wider RH variations. It also creates a significant barrier in communication with decision makers when designing strategies for climate control in new museum buildings or when retrofitting existing ones. This limits the implementation of more energy efficient strategies of collection care in museums, libraries and archives.

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