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Structural Health Monitoring of Historical Buildings

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Message from the Guest Editors

Historical buildings such as churches, towers, and palaces represent a large component of European cultural and monumental heritage. As it is well known, most of these constructions are characterized by masonry load-bearing structures designed to withstand only gravity loads, with very limited earthquake resistance capacity. As a result, historical buildings are particularly prone to structural pathologies typically caused by differential foundation settlements, excessive live loads, and natural hazards such as seismic events. Inadequate maintenance policies and the normal aging of building materials represent common aspects of the causes of the premature collapse of historic buildings.

The growing awareness among citizens and administrations on the critical role of cultural heritage constructions within the tourism industry and related sectors, as well as their historical and artistic values, has motivated the more frequent implementation of structural health monitoring approaches. This Special Issue aims to collect original full papers, review articles, and short communications highlighting the latest advances in research on SHM applications to historical buildings.