



Special Issue Reprint

Assessment, Diagnosis and Service Life Prediction

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Service life prediction is crucial for the adoption of more sustainable solutions, allowing developers to optimize the costs and environmental impact of buildings during their life cycle. An accurate assessment of the service life of buildings requires a thorough understanding of the degradation mechanisms and behaviour of the construction materials. Building pathology assessment methods characterize the deterioration state of buildings, using specific measurable properties as indicators. Based on this information, different service life prediction methodologies can be defined to provide reliable data concerning the most probable failure time of whole buildings and individual components according to their characteristics and their age. This Special Issue provides new perspectives on the existing knowledge related with various aspects of the Assessment, Diagnosis and Service Life Prediction of buildings and their components.

The ten original research studies published in this Special Issue result from research centres and university departments of Civil and Construction Engineering, Safety Management, Environmental Engineering, Geotechnical Engineering, and Architecture and the Built Environment, with relevant contributions from experts from Australia, Brazil, the Czech Republic, Hong Kong, Iran, Israel, Norway, Portugal, and Taiwan. The studies included in this Special Issue address topics related to: Building pathology assessment methods; Diagnosis of defects in buildings and components; Appropriate intervention and repair techniques; Deterministic and stochastic service life prediction models.



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