





Special Issue Reprint

# Probabilistic and Fuzzy Approaches for Estimating the Life Cycle Costs of Buildings

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The Life cycle cost (LCC) method makes it possible for the whole life performance of buildings and other structures to be optimized. The introduction of the idea of thinking in terms of a building life cycle resulted in the need to use appropriate tools and techniques for assessing and analyzing costs throughout the life cycle of the building. Traditionally, estimates of LCC have been calculated based on historical analysis of data and have used deterministic models. The concepts of probability theory can also be applied to life cycle costing, treating the costs and timings as a stochastic process. If any subjectivity is introduced into the estimates, then the uncertainty cannot be handled using the probability theory alone. The theory of fuzzy sets is a valuable tool for handling such uncertainties. In this Special Issue, a collection of 11 contributions provide an updated overview of the approaches for estimating the life cycle cost of buildings.





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