



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

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Message from the Guest Editor

The main topics of this Special Issue will be regarding approaches for estimating the life cycle cost of buildings. The construction sector is a major consumer of natural resources and cost. Life cycle cost (LCC) 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 done 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 to the estimates, then the uncertainty cannot be handled using the probability theory alone. The fuzzy sets theory is a valuable tool for handling such uncertainties. Possible improvements to the traditional approach models, using, for example, an analytical hierarchical model (AHP), are proposed.





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Message from the Editor-in-Chief

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