

Special Issue

Reliability and Optimization for Engineering Design

Message from the Guest Editors

The ability of the engineering component or system to maintain the performance requirements for some time period and environmental conditions can be defined as its reliability in engineering design. When conducting reliability assessment for an engineering structure, uncertainties are significantly influential to the estimates. The uncertainties can be associated with structural resistance. For the lifecycle performance of a structure, the occurrence of deterioration scenarios and hazards should also be considered uncertainties. Additionally, the loading cases are significant sources of uncertainties, and geotechnical uncertainties are crucial in geotechnical reliability assessment.

Apart from assessing the engineering reliability, uncertainties should also be incorporated in the decision-making process, where the three risk attributes should be balanced with the structural performance. To this end, optimization techniques can be adopted to find a solution.

This Special Issue aims to provide a venue for researchers and engineers working in various fields to present the latest developments in engineering reliability analysis and optimization designs.

Guest Editors

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