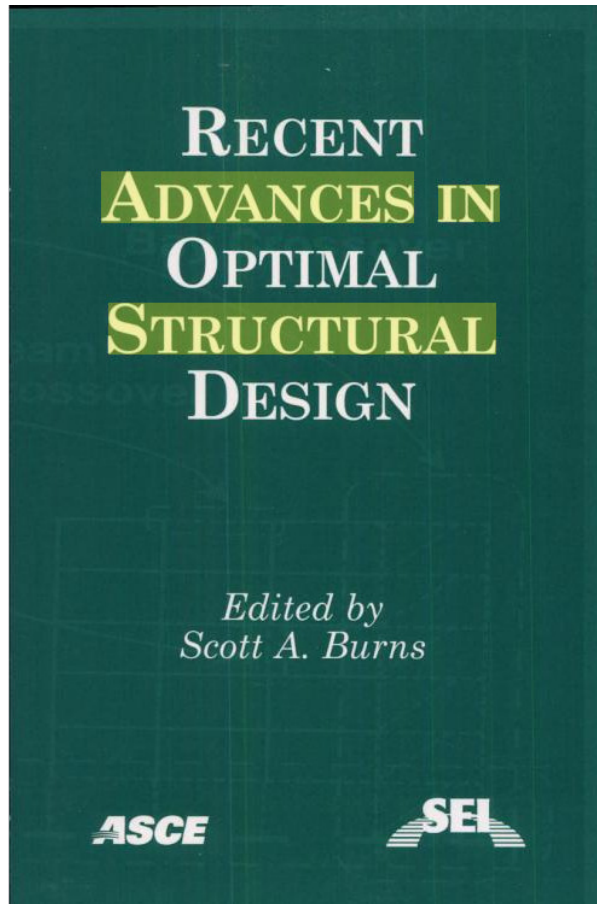


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Abstract: *Recent Advances in Optimal Structural Design* documents developments in structural optimization theory and application over the past twenty years. *Advances* in algorithms and computational methods include mathematical decomposition methods, algorithms for discrete variables and multiple objectives, computational methods for preliminary and conceptual design, optimization for life-cycle cost considerations, and optimal design for frames with semi-rigid connections. Performance-based design has gained considerable attention recently, particularly within the seismic design community, as a framework for establishing multiple performance objectives corresponding to various expected levels of hazard. A sizable portion of this book addresses this topic, as optimization is expected to play an important role in this area. Finally, several thousand journal papers related to optimal structural design are cited, indexed by topic, as a resource for researchers and students in the field.

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