

## STOCHASTIC OPTIMIZATION OF STRUCTURES

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### ABSTRACT

Deterministic structural optimization has progressed substantially over the past few decades. However, due to the inherent uncertainties in structural parameters and external loads, deterministic structural optimization cannot capture the optimal performance of structures from a probabilistic point of view. Stochastic structural optimization, which combines the classical theory of structural optimization with the probability theory, provides the statistical optimal performance of structures with consideration of uncertain structural parameters and random external loads.

The goal of this mini-symposium is to bring together researchers working on stochastic optimization of structures. Potential topics may include, but are not limited to:

- Recent advances in optimization algorithms
- Structural optimization with uncertainties
- Topology optimization with uncertainties
- Multi-objective optimization with uncertainties
- Multidisciplinary optimization with uncertainties
- Stochastic sensitivity analysis methods and applications
- Stochastic optimal control of structures
- Reliability-based optimal design of structures