

# Structural Optimization with Manufacturing Constrains

**Andrzej Myśliński**

Systems Research Institute, [myslinsk@ibspan.waw.pl](mailto:myslinsk@ibspan.waw.pl)

## SUMMARY/TOPICS

The Symposium aims to present the latest achievements in the field of the structural optimization especially with the manufacturing constraints. It is expected to be a forum to exchange views and ideas on various aspects on design, optimization or optimal control of structures. All emerging topics spanning across various disciplines are under consideration. The special attention is paid to the use of modern materials and methods to improve performance, economic and safety factors of newly designed structures. However, papers exploring wide range of structural design problems treating them in more traditional way are also welcome.

The Symposium topics cover, but are not limited to:

- recent development in structural optimization methods and algorithms,
- structural and multidisciplinary optimization considering nonlinear behavior,
- new approaches to handle various constraints including stress, fatigue, or manufacturability,
- topology optimization for multiple loading conditions,
- topology optimization in fluid dynamics, thermodynamics, electromagnetism and acoustic problems,
- topology optimization with functionally graded materials,
- theoretical and engineering aspects of additive manufacturing,
- optimal design with innovative heuristic approaches, evolutionary methods, cellular automata,
- application of artificial intelligence and methods based on biological patterns,
- original concepts of design methodology and new possibilities for long-standing design methods,
- optimization of sensor and actuator placement in structural control and monitoring problems,
- optimal control of smart structures,
- application of shape or topology optimization methods in image processing problems,
- engineering applications including large scale industrial problems.

