

## Objectives

Multidisciplinary Design Optimization - MDO - deals with the optimal design of structural elements or systems employed in several engineering fields such as the aerospace industry, where reducing the structural weight is one of the most important tasks. Nowadays, use of Structural Optimization is rapidly growing in automotive, aeronautical, mechanical, civil, nuclear, naval, and off-shore engineering. This is due to the increase of technological competition and the development of strong and efficient techniques for several practical applications. The increase of speed and capacity of computers allows large-scaled structures and systems to be optimized. The main scientific challenges of MDO are concerned with the development of strong and efficient numerical techniques and with the computational procedures required for the necessary coupling of disciplinary software systems. Also, the applications related to real problems such as parameter identification is very difficult due to the gap that still exists between the industrial requirements and university research. In addition to the above points, the efficiency of the optimal result depends on the efficiency of the simulation and the modelling process. For these reasons, one of the main objectives of this international conference is to bring together scientists and practitioners working in different areas of engineering optimization.

## Conferences Topics

Industrial Applications and Software Systems,  
Design Optimization and Inverse Problems,  
Sensitivity Analysis,  
Structural Optimization : Topology, Shape and Sizing Optimization,  
Micro and Nano-Technologies,  
Finite Elements Method,  
Finite Differences Method,  
Meshless Methods,  
Real-Time Optimization,  
Vibrations and Structural Dynamics,  
Computing Mechanics,  
Robotics, Optimal Control,  
Heat and Mass Transfer,  
Imaging, Biomedical Engineering,  
Multi-scale Optimization,  
Optimization of Composite Materials,  
Mathematical Programming Algorithms,  
Communication Aspects of Parallel & Distributed Algorithms,  
Distributed Computing in Design Optimization,  
Concurrent Engineering,  
Design of Experiments,  
Simulation and Modelling,  
Integration of Optimization Tools in the Design and Manufacturing Process,  
Multi-objective Optimization,  
Robust Design,  
Evolutionary Strategies,  
Computational Methods,  
Optimization in Economics and Finance,  
Identification.

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