



<http://engopt.org/index.php>

5th International Conference on Engineering Optimization - Iguassu Falls, Brazil, 19-23 June 2016

*A meeting for Engineers, Mathematicians and Computer Scientists to share research
and innovations, promoting interdisciplinary activities in all fields of Engineering
Optimization*

Introduction

About EngOpt

The previous International Conferences of Engineering Optimization took place in 2008 and 2012 at Rio de Janeiro and at Lisbon in 2010 and 2012. There were very successful in number and quality of participants and presentations. The proceedings are available through the present website.

Objectives

The main goal of EngOpt conferences is to periodically bring together engineers, applied mathematicians and computer scientists working on research, development and practical application of optimization methods applied to all engineering disciplines or developing basic techniques in this field.

Engineering Design Optimization

Modern design techniques seek for the best design to perform the desired tasks. Engineering Optimization deals with the optimal design of elements and systems in all engineering fields.

Nowadays, use of Design Optimization techniques is rapidly growing in most of engineering disciplines, like automotive, aeronautical, mechanical, civil, nuclear, naval, mechanical, electrical, energy 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.

Conference Themes

DESIGN OPTIMIZATION AND INVERSE PROBLEMS:

- Acoustic
- Aerodynamics
- Chemistry and combustion
- Civil Engineering
- Design of Experiments
- Electrical Systems
- Electromagnetism
- Fluid Mechanics
- Geophysics
- Heat and Mass Transfer
- Imaging
- Materials processing
- Mechanical Engineering
- Meteorology
- Nuclear Engineering
- Planning
- Robotics
- Solid Mechanics
- Scheduling
- Tomography
- Vibrations and Structural Dynamics

BASIC NUMERICAL OPTIMIZATION TECHNIQUES:

- Shape Optimization
- Size Optimization
- Topology Optimization
- Mathematical Programming Algorithms
- MDO - Multidisciplinary Design Optimization
- Optimality Criteria Methods
- Genetic Algorithms
- Evolutionary Techniques
- Fuzzy Optimization
- Optimization with Approximate Models
- Response Surface Methods
- Metamodels and Surrogates in Optimization
- Artificial Intelligence and Neural Networks
- Multi-objective Optimization
- Global Optimization
- Decomposition Methods
- Concurrent Engineering
- Robust Design
- Reliability-Based Design Optimization
- Multi-scale Optimization
- Efficient Analysis and Reanalysis Techniques with Finite Elements Method
- Boundary Elements Method
- Finite Differences Method
- Finite Volume Method
- Meshless Methods
- Sensitivity Analysis
- Analytic and Semi-analytic Formulations
- Variational Formulation
- Automatic Differentiation
- Topological Derivatives and other techniques
- Linear Programming
- Nonlinear Programming
- Mixed Linear and Nonlinear Programming
- Integer Programming
- Stochastic Optimization

INDUSTRIAL APPLICATIONS:

- Aeronautical Industry
- Automotive Industry
- Bio - Mechanics Applications
- Chemical Processing Equipments
- Energy Generation and Transmission
- Machinery Optimization
- Micro-Mechanics Systems - MEMS
- Micro and Nano - Technologies
- Oil and Gas Industries
- Space Industry and other Industrial Applications

Important Dates

- Now: Pre-registration is open
- 1st October 2015 - Abstract submission is open
- 30th November 2015 - Registration is open
- 15th January 2016 - Deadline for the short abstract, to be included in the proceedings book of the conference (Up to 3200 characters including spaces, written in plain text, without mathematical formulas). No more than one oral or poster presentation can be delivered per each registered author.
- **Notification for paper acceptance: 15 days after submission**
- 30th March 2016 - Deadline for early registration
- 30th April 2016 - Deadline for presenting authors registration (To avoid non-shows, only papers with registered presenting authors will be included in the final program)
- 15th May 2016 - Final Program on the conference website
- 30th May 2016 - Deadline for full papers uploading. **Although the submission of full papers is not mandatory, authors are encouraged to support the accepted Abstract with the respective Paper.**
- 19th June 2016: THE CONFERENCE BEGINS