



15th LS-DYNA International Conference & Users Meeting

Pre-Conference Training (1 day)

Sunday, June 10, 2018, 9am-5pm

Edward Hotel & Convention Center, Dearborn, MI

Introduction to LS-TaSC[®]

Instructor: Imtiaz Gandikota

Prerequisite: An introductory class in LS-DYNA recommended

Objective

This 1 day course provides an introduction to the use of the topology optimization and shape computation code (LS-TaSC) for design. It covers both theoretical concepts and practical aspects of topology optimization. The course includes workshop sessions in which the theoretical topics of the day are applied. The LS-TaSC graphical user interface is used to teach input preparation and post-processing.

COURSE CONTENT

- Introduction to topology optimization using industrial examples
- LS-TaSC features
- Theory:
 - Optimization formulation
 - SIMP penalization
 - Global and local optimization
 - Design filtering
 - Constrained optimization using multi-point method
 - Termination criteria
- Setting up and running a simple topology optimization example
- Design parts with solids and shell elements
- Topology optimization using multiple load cases and multiple parts
- Free surface design
- Post-processing of results