



**11th Int'l LS-DYNA Users Conference Training Courses
Wednesday & Thursday, June 09-10, 2010**

**Training Course Registration: 8:00 a.m.
Training Courses Held: 9:00 a.m - 5:00 p.m.**

Continental Breakfast/Lunch both days

**Optimization Using LS-OPT[®] and LS-DYNA[®]
Instructor: Dr. Nielen Stander**

The course is to provide an understanding of simulation-based optimization and reliability using LS-DYNA. The graphical user interface is used to teach input preparation and post-processing. The newly released LS-OPT V4.1 is used, so this is an opportunity to become familiar with the new features.

Day I

Optimization Theory. Experimental Design, Metamodeling, Optimization.
Introduction to the Graphical User Interface. A demonstration of the GUI to set up a design optimization problem using LS-DYNA for simulation.

Lunch

Crashworthiness optimization. Setting up and running an optimization problem with LS-DYNA.

Day II

System Identification. A problem to identify material parameters from experimental results. Confidence intervals.

Multi-disciplinary optimization. Learn how to set up an optimization problem with more than one case or discipline. Combines crashworthiness with frequency criteria in a single design.

Multi-objective optimization. Optimize a problem with more than one objective. Post-processing specific to MOO problems using scatter plots, Hyper Radial Visualization, Parallel Coordinates and Self-Organizing Maps. (Time allowing).

Lunch

Reliability analysis. Use of Monte Carlo simulation to determine the reliability of a structural design. Theory and tutorial.

For training inquiries contact Cathie – Cathie@lstc.com