



Locations:

Livermore Software Technology Corp.

7374 Las Positas Rd. Livermore, CA 94551

1740 West Big Beaver Road Troy, MI 48084

Contact: classes@lstc.com

www.lstc.com/training

Plasticity, Plastics, and Viscoplastic Materials in LS-DYNA

Instructor: Dr. Ala (Al) Tabiei

1.5 Days - \$1,250 Students \$950 w/student ID

Includes on site continental breakfasts, lunches, breaks, class dinner

Includes 30-day LS-DYNA demo license to practice

Prerequisite: Introduction to LS-DYNA Class, or equivalent experience.
Students should have a command of the LS-DYNA keywords and options associated with Plasticity, Plastics & Viscoelastic Materials

Description: This class is an advanced course on material models in LS-DYNA. It provides information on the use of most common plastics and viscoplastic materials in LS-DYNA. The class will provide understanding of what materials are used for a particular situation. Examples are used to illustrate the points made in the lectures. The class is for those who want to use plastics and viscoplastic materials in LS-DYNA with more detail and advance topics in impact finite element simulation and in the area of impact, crashworthiness, deformation and strength of isotropic and most common materials.

Course Outline

Introduction

Experimental Characterization

Material Models for Plasticity

- *MAT_003 *MAT_PLASTIC_KINEMATIC
- *MAT_010 *MAT_ELASTIC_PLASTIC_HYDRO
- *MAT_015 *MAT_JOHNSON_COOK
- *MAT_024 *MAT_PIECEWISE_LINEAR_PLASTICITY
- *MAT_081-082 *MAT_PLASTICITY_WITH_DAMAGE
- *MAT_124 *MAT_PLASTICITY_COMPRESSION_TENSION

Material Models for Plastics

- *MAT_089 (*MAT_PLASTICITY_POLYMER)
- *MAT_187 (*MAT_SAMP-1)

Material Models for Viscoplasticity

- *MAT_224 *MAT_TABULATED_JOHNSON_COOK

Material Data & Behavior Demonstration

Concluding Remarks
