**Livermore Software Technology Corp.**
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# Plasticity, Plastics, and Viscoplastic Materials in LS-DYNA

**Instructor: Dr. Ala (Al) Tabiei** atabiei@lsdyna-online.com

**2 Days - $1,250 Students $625** w/student ID
Includes on-site continental breakfasts, lunches, breaks, class dinner
Includes 30-day LS-DYNA demo license to practice

**Description**: This training class will provide analysts with the additional tools and knowledge required to model polymers and metal materials. Attendees will use LS-DYNA keywords to analyze problems involving plastics and visco-plastic materials. Examples are used, which are designed to understand and reinforce the lectures and the concepts presented in the course.

**Course Contents:**

- **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 Viscoplastics**
  *MAT_224 *MAT_TABULATED_JOHNSON_COOK
- **Defining Minimum and Recommended Tests**
  Perform and review the process of data-cleansing and conversion of the test data
- **Material Data & Behavior Demonstration**
- **Concluding Remarks**