



Livermore Software Technology Corp.

Locations:

7374 Las Positas Rd, Livermore, CA 94551

1740 West Big Beaver Rd, Troy, MI 48084

Contact: classes@lstc.com www.lstc.com/training

Introduction to EM - Electromagnetism

Instructor: İñaki Çaldichoury

1 Day - \$200 Students \$100 w/student ID

Includes on-site continental breakfast, lunch, breaks

Includes 30-day LS-DYNA demo license to practice

Description: This one-day class is an introduction to the Electromagnetism (EM) solver in LS-DYNA. Key physical and numerical concepts are presented; keyword examples are described and studied. The main applications include magnetic metal forming, welding, bending, ring expansions, inductive heating, resistive heating, rail guns and so forth. Students should already be familiar with LS-DYNA for computational mechanics and thermal problems for solids. EM knowledge is useful, but not mandatory.

Course Contents:

Introduction to the EM solver

- Background
- Main characteristics
- Examples of applications

Setting up an Eddy Current problem

- Step by step keyword set up
- Coupling with structural and thermal solvers
- EM equation of states

Current and future post treatments

- Electromagnetics
- FEM-BEM system
- Source Terms
- The FEMSTER library

Advanced Capabilities

- Inductive heating
- Resistive heating
- EM contact
- Magnetic materials

Documentation and references