



# 15th LS-DYNA International Conference & Users Meeting

**Post-Conference Training (2 day)**  
**Wed & Thurs, June 13<sup>th</sup> & 14<sup>th</sup>, 2018, 9am-5pm**  
*Edward Hotel & Convention Center, Dearborn, MI*

## Introduction to Metal Forming & eZ-Setup

**Instructor(s): Xinhai Zhu, Quanqing Yan, Li Zhang, Yuzhong Xiao**

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**Prerequisite:** Students should already be familiar with:

- 1) LS-DYNA basic forming related keywords/ features, and
- 2) LS-PrePost general operation menu

**Objective -** PowerPoint presentation combined with hands-on tutorials to cover Metal Forming and .LS-PrePost® Metal Forming eZ-Setup

### COURSE CONTENT

- Introduction
- Advanced material models
- Nonlinear failure prediction (Formability Index)
- Moving adaptive box for fission and fusion
- Tool mesh autocheck, fixing
- Improvement in springback compensation
- Enhanced scrap trimming and fall simulation
- May also include following if time allows:
  - Define material hardening behavior in LS-DYNA with \*DEFINE\_CURVE\_STRESS
  - Convert from FLD to stress triaxiality, and vice versa
  - Allow part set in \*BOUNDARY\_SPC\_SYMMETRIC\_PLANE (SET)
  - \*CONTROL\_FORMING\_BESTFIT for best fit of springback result with scans
  - Improvement to one-step simulation \*CONTROL\_FORMING\_ONESTEP
  - Automatic change from shell to thick shell elements \*CONTROL\_FORMING\_SHELL\_TO\_TSHELL
  - Uniform mesh refinement inside of a curve loop with \*CONTROL\_ADAPTIVE\_CURVE
  - Extension of \*Control\_Forming\_Toleranc to \*MAT\_125, \*MAT\_226 (already available to \*MAT\_036 and \*MAT\_037)
  - \*MAT\_260A and \*MAT\_260B

### **Part II: LS-PrePost® Metal Forming eZ-Setup**

1. Overview of LS-PrePost4.3 on the new eZ-Setup GUI (lspp\_parameter, batch submit queue, etc.);
2. Basic and multiple stamping processes set up, covering tailor welded blanks; Typical multi-stage process including, gravity, forming(3, 4-piece die set), trimming, flanging, springback
3. Multi-tool forming
4. Post-processing forming and springback results.
5. Scrap fall trim and fall.
6. Bestfit GUI
7. One-step forming simulation GUI

For further information regarding pre- and post-conference training, please consult the conference website [www.ls-dynaconferences.com](http://www.ls-dynaconferences.com) or send email to [ConfTraining@lstc.com](mailto:ConfTraining@lstc.com).