

Post-Conference Training

June 6-7, 2012 (Wed-Thur), 9a-5p, **University of Michigan-Dearborn**
(two days, includes light continental breakfast at 8:30am, lunch each day)

Please Note: Final course selection, BASED ON REGISTRATION RESPONSE, will be announced May 1, 2012.
Registration Confirmations will be sent to registered students after this date.

Course Fee: \$450 (Students with valid ID: \$250)

Occupant & Vehicle Environment Modeling, Regulations & Safety Ratings, Airbag Modeling, Dummies & Barriers

Instructors: Sarba Guha, Dilip Bhalsod,
Christopher Maurath (LSTC)



Basic Outline of Course Content:

- A) Short Discussion of LSTC's Dummy Models and Barriers
 - 1) Overview of LSTC Anthropomorphic Models
 - 2) Overview of LSTC Barrier Models
- B) The Basic Model of the Occupant inside the Vehicle (Frontal)
 - 1) How to Position the H-III Dummy Model in a Vehicle Environment
 - 2) How to Route a Seatbelt over the Dummy and the intricacies of the Seatbelt Model. How to apply "Contact" with the Dummy.
 - 3) The simple Vehicle Model for Frontal Occupant Analysis and its intricacies. How to apply Pitch, Drop and Yaw. How to apply "Contact".
 - 4) How to apply Pulse to the Dummy
 - 5) How to run the "Combined Model"
- C) How to Quickly Modify Existing Models
 - 1) How to reposition the Dummy for small movements in H-Point and Pelvic Angle, without rerouting the Seatbelts.
 - 2) How to modify an existing fully-running model and change it into one that represents a completely different vehicle, in a different design location, thus reducing modeling time.
- D) Overview of Safety Regulations, Ratings and Data Processing
 - 1) FMVSS 208/214
 - 2) US NCAP and IIHS Tests/Ratings
 - 3) European Regulations and EuroNCAP
 - 4) Test/CAE data processing
- E) Airbag Modeling
 - 1) The "Airbag Hybrid" and "Particle Method" options in LS_Dyna discussed (in brief).
 - 2) The various "Bag Venting" types will be discussed (in brief).
 - 3) Detailed Models demonstrating the above, will be contained in the distributed package.
 - 4) Tentative: a demonstration of "How to Fold Airbags"