

## Training classes

### LS-OPT, Introductory Course

Date: 24 - 25 November, 2009

Price: 6 000 SEK excl. VAT

Register: [www.erab.se/course](http://www.erab.se/course) ([course@erab.se](mailto:course@erab.se))

This introductory course teaches how to use LS-OPT for structural optimisation, parameter studies and material parameter identification. It also covers the basic theory of LS-OPT, but the main focus is on hands on training where the participants carry out a series of typical optimisation problems. LS-OPT also includes advanced stochastic analysis methods and these possibilities will be briefly discussed.

Teacher: Dr. Daniel Hilding ([daniel.hilding@erab.se](mailto:daniel.hilding@erab.se))

### LS-DYNA, Material Modelling

Date: 7 - 9 December, 2009

Price: 10 500 SEK excl. VAT

Register: [www.erab.se/course](http://www.erab.se/course) ([course@erab.se](mailto:course@erab.se))

This class covers the theoretical and practical aspects of the most common material models in LS-DYNA as well as a thorough introduction to the user material interface. The course also includes a number of computer exercises.

Teacher: Dr. Thomas Borrvall ([thomas.borrvall@erab.se](mailto:thomas.borrvall@erab.se))

## New releases



**ANSA v13.0.2** includes important enhancements and code corrections especially for the CFD community. For complete release notes please go to:

[www.erab.se/documents/ansa\\_13.0.2.pdf](http://www.erab.se/documents/ansa_13.0.2.pdf)

**METApост v6.4.1** includes important enhancements and code corrections. For complete release notes please go to:

[www.erab.se/documents/metapost\\_6.4.1.pdf](http://www.erab.se/documents/metapost_6.4.1.pdf)



**LS-PrePost v3.0 (beta)** is now available for testing purposes. The 3.0 is a new milestone for LS-PrePost with lots of enhancements and a new visually appealing graphical user interface. We encourage you to try it out but have in mind that it is still under development.

## Windows 7

We are happy to announce that SMP LS-DYNA R4.2.1 64-bit single and double precision have been successfully quality assured on Microsoft upcoming operating system Windows 7.

## Recent Projects

### Frequency response analysis

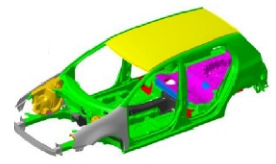
In a successful co-operation with Bombardier Transportation, a frequency response analysis of a railway car body in white has been performed. Totally 9733 eigenmodes up to 2kHz were computed for the 305 000 elements FE-model using the powerful Lanczos eigensolver in LS-DYNA. Using 16



cores and 64 GB of memory on our new Intel Xeon based cluster, the eigensolution was obtained in just 11 hours and frequency response functions for 12 load cases were computed in a few minutes. The computed mobility responses were in good agreement with measurements performed by Bombardier Transportation.

### Super Light Car (SLC)

The SLC project has reached its goal after 4.5 years of research and development. It was a joint European effort of more than 30 partners from the automobile industry with a budget of €20 M. The focus of the project was to develop a significant lighter body in white. ERAB has supported the SLC project with know how in crash simulation as well as special simulation tools for the new materials that are used in the SLC project. For further information read the full article at: [www.erab.se/documents/SLC\\_ERAB.Article.pdf](http://www.erab.se/documents/SLC_ERAB.Article.pdf)



## New Cluster

We recently installed a small 16-core cluster for in-house use. This is our first local installation using the new Intel Nehalem microarchitecture and infiniband. It has been proven to be twice as fast as the previous generation of Xeon CPUs when running MPP LS-DYNA. Such a leap in performance is quite rare, and should be good news for anyone looking to maximise the value of their LS-DYNA licenses.

Engineering Research can help you with your next compute cluster investment. Our long experience in this area allows us to deliver turn-key solutions with great productivity for LS-DYNA engineers.

## Visualisation

Impress your customer with a professionally rendered animation. We can make your simulations come to life by adding lifelike materials and dynamic surroundings, e.g., metallic paint, glass, asphalt, grass, trees, etc., to the model. Together with nice lighting and dared camera angles, your product's performance can be visualised in a way that is exciting not only to engineers. Ask your contact at Engineering Research for more information.

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## Past ERAB News

It is now possible to read our past newsletters. They are collected online on our web site under NEWS

[www.erab.se](http://www.erab.se)

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## Support

For questions regarding our software suits, please do not hesitate to contact us at:

[support@erab.se](mailto:support@erab.se)  
+46(0) 13 23 66 80