

Engineering Research AB - Livermore Software Technology Corp.:
Second European LS-DYNA Conference, June 14-15 1999
Hotel 11, Maskingatan 11, Gothenburg
Conference program

Sunday June 13:

16.00-19.30 Boating Event

Meeting point at the quay next to Hotel 11
Sponsored by Compaq Computer AB

18.00-22.00 Conference Registration and Exhibition

Outside the Theatre, Hotel 11

20.00-22.00 Welcome Reception

Held outside the Theatre, Hotel 11
Sponsored by Hewlett Packard Sverige AB

Monday June 14: Conference location THEATRE

8.30-9.00 Registration /Refreshments

9.00-9.10 Welcome

9.10-10.05 Keynote Speaker

John O. Hallquist, Livermore Software Technology Corporation:

Recent improvements in LS-DYNA

10.05-10.35 Morning Refreshments

10.35-12.20 General session I

Chairman:

Karl Brian Nielsen, M. R. Jensen and J. Danckert, Aalborg University:

Optimization of sheet metal forming processes by a systematic application of finite element simulations

Tomas Sjödin and Peter Karlsson, Saab Automobile:

A method for integrated simulations in the crashworthiness development process

Peter Arvidsson, Volvo Car Components Corporation:

Cutting leadtime by using stamping simulation at Volvo

Karl Schweizerhof, M. Walz, W. Rust and U. Franz, CADFEM:

Quasi-static structural analysis with LS-DYNA – Merits and limits

Odd Sture Hopperstad, T. Berstad, O-G Lademo and K A Malo, The Norwegian University of Science and Technology:

Computational model of ductile damage and fracture in shell analysis

12.20-13.45 Lunch

Served outside the Theatre, Hotel 11

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Monday June 14: **Conference location THEATRE**

13.45-15.30 Crash & Safety Session I:

Chairman:

Abdullatif K. Zaouk, N. Tamborra, J. Ennis and D. Marzougui,
FHWA/NHTSA National Crash Analysis Center:

*Development and evaluation of an integrated vehicle-occupant
finite element model for frontal impact analysis*

Karl Kristian Berger, Hydro Raufoss Automotive:

*Simulation of steel bolt shearing/cutting through aluminium
profiles*

Lars A. Fredriksson, Altair Engineering GmbH:

*Response surface optimization with LS-DYNA using Altair
HyperOpt and stochastic analysis*

Andreas K. Volz, DaimlerChrysler:

Car body design in the concept stage of vehicle development

Tuhin Halder, V. F. Mannino and D. K. Williams, Lear Corporation:

*Simulation of bolts and washers using LS-DYNA for seat
attachments and correlation with the test data*

15.30-16.00 Afternoon refreshments

Served outside the Theatre

16.00-18.05 Civil Engineering Session:

Chairman:

Samir N. Shoukry and G. W. William, West Virginia University:

*Applications of 3D finite element modeling in pavement analysis
and design*

Neil Kirk, A. Rushton and J. Sargent, WS Atkins Science & Technology:

*Non-linear analysis of a reinforced concrete structure under
seismic loading*

Bhavik Shah and Richard Sturt, Ove Arup & Partners:

*Oasys PRIMER - Rapid model builder to meet shorter design
cycle times in the automotive industry*

Wybo Gardien, H. Stuit and F. de Boer, Holland Railconsult:

Finite element wave propagation models

Jeremy M. Tandy, Ove Arup & Partners:

Seismic and Soil Mechanics applications using LS-DYNA

Jeff Zais, IBM:

Further evaluation of the MPI version of LS-DYNA

19.30- Conference Dinner

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Monday June 14: Conference location **ERIKSBERG 40**

13.45-15.30 Metal Forming Session I:

Chairman:

Kjell Mattiasson, Volvo Car Corporation:

*Prediction of necking failure in sheet metals with special
reference to shell element formulation*

Jan Terziyski and Jan-Olov Perä, MEFOS - The foundation for
metallurgical research:

*Simulation and validation of elasto-plastic bending of narrow
strips*

Ingvar Rask and Dag Thuvesen, IVF - The Swedish Institute of Production
Engineering Research:

Simulation of an engineering process - tube hydroforming

Roger Chu, SGI:

The MPP-DYNA Status on SGI Origin 2000

Frode Iglebæk, ViewTech ASA:

Interpretation and communication of FE analysis results

15.30-16.00 Afternoon refreshments

Served outside Eriksberg 40

16.00-18.05 Metal Forming Session II:

Chairman:

Andreas Haas, H. Bauer, I. Lerch, University of Aalen,

M. Mihsein and R. Hall, University of Wolverhampton:

*Production integrity for hydroforming products by using FEA
Techniques*

Anders Skogsgårdh, Volvo Car Components Corporation:

FE simulation of tube hydroforming

Olof Wiklund, MEFOS - The foundation for metallurgical research:

*Rolling simulation of plates, strips, rods and profiles of steel at
MEFOS*

Tayeb Zeguer, Jaguar Cars:

The use of LS-DYNA in the development of the Jaguar S type

George Bahouth and C-D. Kan, FHWA/NHTSA National Crash Analysis
Center:

Volumetric modeling of skeletal muscle

Peter Šolek and Pavel Élesztös, Slovak Technical University:

Design of the deformation part for the low-speed crash

19.30- Conference Dinner

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Tuesday June 15: Conference location THEATRE

8.30-8.45 Gathering
8.45-10.05 General Session II:

Chairman:

Jean-Luc Lacome, DYNALIS:

S.P.H.: A new feature in LS-DYNA

Jens Borg, Adtranz:

Train crashworthiness analysis

Trevor Dutton, S. Iregbu, R. Sturt, Ove Arup & Partners,

T. Kellicut, B. Cowell and K. Kavikondala, Tower Automotive:

*Studies of the effect of forming on the crash response of vehicles
with hydroformed frames*

Andreas Hirth, DaimlerChrysler and P. Du Bois, Hermes Engineering:

*From complex 3D-foam parts to ready LS-DYNA inputdata in
less than one hour? Examples from occupant simulation at
DaimlerChrysler*

10.05-10.35 Morning Refreshments

10.35-12.20 General Session III:

Chairman:

Larsgunnar Nilsson, Engineering Research, P-O. Marklund, Linköping
University, S. Rahm, M. Jonsson, SSAB Hardtech, T. Svantesson and L.-
O. Hellgren, Saab Automobile:

Optimization of a car body component subjected to side impact

Odd Perry Søvik, Hydro Raufoss Automotive Technical Centre:

*The use of LS-DYNA in development and optimisation of forming
processes for high strength aluminium extrusions to the
automotive industry*

Robert Kuhn, H. Rajic, Kuck & Associates, Inc., A. Akkerman, R.
Thyagarajan, Ford Motor Company and N. Stander, Livermore Software
Technology Corporation:

Optimization of instrument panel crashworthiness

Cing-Dao Kan, FHWA/NHTSA National Crash Analysis Center and Y-Y.
Lin, Hewlett Packard Company:

*Evaluation of high performance computer systems using a large
size finite element model*

Lars Olovsson and M. Souli, Livermore Software Technology
Corporation:

Multi-material Eulerian capabilities in LS-DYNA

12.20 Lunch

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Tuesday June 15: Conference location THEATRE

- 13.45** Torsten Gärtner, EASi Engineering, M. Eriksson and J. Fältström, Linköping University:
Advanced technologies for the simulation of folded airbags
Bengt Pipkorn, Autoliv Research:
An approach for a new biofidelic multi-directional dummy spine model
Waldemar Z. Golinski and R. Gentle, The Nottingham Trent University:
Assessment of a whiplash prevention device with a dynamic biomechanical finite element model
Jikuang Yang, Chalmers University of Technology:
FEM modelling of the human lower extremity skeleton in a lateral impact
Ulrich Franz, M. Walz and O. Graf, CAD-FEM:
Enhancements to the FAT FE dummies using specific features of LS-DYNA
- 15.30 Afternoon Refreshments**
- 16.00** John O. Hallquist, Livermore Software Technology Corporation:
Recent improvements in LS-DYNA
- 16.45 Concluding remarks**

Tuesday June 15: Conference location ERIKSBERG

- 13.45** Tore Børvik, O. S. Hopperstad, T. Berstad, K. A. Malo and M. Langseth, The Norwegian University of Science and Technology:
Numerical simulation of plugging failure in ballistic penetration using LS-DYNA
James Farrer, EQE International:
A preliminary investigation into blast wall response and failure modes for hydrocarbon explosions using LS-DYNA
Dhafer Marzougui, C-D. Kan, A. Eskandarian, FHWA/NHTSA National Crash Analysis Center and L. Meczkowski, Federal Highway Administration:
Finite element simulation and analysis of portable concrete barriers using LS-DYNA
Bassem Zouari, K. Raissi and M. Touratier, Ecole Nationale Supérieure d'Arts et Metiers, Paris:
Numerical simulation of abrasive particle impact using LS-DYNA
Knut Erling Moen, Raufoss Technology, N. Brännberg, Frontec R&T and P. Ohlsson, Computare:
Analysis of dropped diesel tanks
- 15.30 Afternoon Refreshments (served outside Theatre)**

Continues in the Theatre