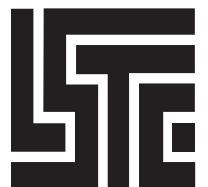


3rd EUROPEAN LS-DYNA USERS CONFERENCE 2001

**June 18 and 19, 2001
Paris, France**

CONFERENCE PROCEEDINGS



MONDAY, JUNE 18, 2001

1.A. COMPUTING

- 1 - *Hans Leichtl, Compaq Computer Corporation*
- 2 - *Christian Tanasescu, SGI*
- 3 - Web-Centric LS-DYNA – Henry H. Fong, Sun Microsystems Inc.
LS-DYNA performance on UltraSPARC™-III Servers and Workstations
Henry H. Fong, Sun Microsystems Inc.
- 4 - Parallel Performance of LS-DYNA on the Next Generation of Computer Systems – Jeff Zais, IBM
- 5 - *Franck Baetke, Hewlett Packard*

KEY NOTE LECTURE

Vehicle modeling for crashworthiness, a review of the State-of-Art
Paul Du Bois, consulting engineer

1.B. AUTOMOTIVE

- 1 - Influence of manufacturing processes on the performance of vehicles in frontal crash
Horst Lanzerath, Ford
- 2 - The influence of residual effects of stamping on crash results – Richard Sturt, Ove Arup & Partners
- 3 - Integrated analysis of forming and crashworthiness of high strength aluminium bumpers using LS-DYNA
Odd Sovik, Hydro Automotive Structures

2.B. MATERIAL MODELING

- 1 - Finite element analysis of ductile failure in structural steel subjected to multiaxial stress states and high strain rates – Tore Borvik, SIMLab, Norwegian University of Science and Technology
- 2 - The generation of a material model to represent the mechanical behaviour of an aliphatic polyetone (Carilon EP) at high strain rate events and low temperatures - Jérôme Coulton, ACTS
- 3 - An experimental and numerical study on the energy absorbing capability of aluminium extrusions under oblique loading - A. Reyes, SIMLab, Norwegian University of Science and Technology

3.B. MISCELLANEOUS

- 1 - Simulation of Nonlinear Visco-elasticity – Kazuyoshi Miyamoto, Sumitomo Rubber Industries, Ltd
- 2 - Efficient modeling of panel-like targets in perforation simulation
Guangyu Shi, Institute of High Performance Computing
- 3 - *Application of LS-DYNA for the analysis of reinforced concrete structures under dynamic loadings*
Eric Buzeaud, Dynalis

1.C. AUTOMOTIVE

- 1 - Characterization and component level correlation of EA, PU using LS-DYNA material models
Babushankar Sambamoorthy, Lear Corporation Ford Division
- 2 - Modeling the “Shaken baby syndrome”
Ian Howard, Structural Integrity Research Institute of the University of Sheffield (SIRIUS)
- 3 - Effectiveness of countermeasures in response to FMVSS 201 upper interior head impact protection
Arun Chickmenahalli, Lear Corporation
- 4 - *Optimizing occupant protection with LS-DYNA for the European Safety Regulations*
Chuck Bosio, Bosion Engineering

2.C. OPTIMIZATION / STOCHASTIC

- 1 - Shape optimization for head and knee impact featuring adaptative mesh topology and a discrete variable
Niele Stander, LSTC
- 2 - Optimisation and robustness of side airbag design and analysis – Tayeb Zeguer, Jaguar Cars
- 3 - The identification of rate-dependent material properties in foams using LS-OPT
Heiner Müllerschön, CAD-FEM GmbH
- 4 - *Application of stochastic simulation in the automotive industry – Ralf Reuter, EASi Engineering GmbH*

3.C. FLUID

- 1 - Improved fluid structure interaction capabilities in LS-DYNA – Lars Olovsson, LSTC
- 2 - Hydroplaning simulation using fluid-structure interaction in LS-DYNA
Masataka Koishi, The Yokohama Rubber Co., Ltd
- 3 - Simulation of detonation chamber test case – Daniel Hilding, Engineering Research AB
- 4 - ALE and fluid-structure interaction in LS-DYNA–Mhamed Souli, USTL

TUESDAY, JUNE 19, 2001

KEY NOTE LECTURE

F-Ma=0: The unique certitude in Aerospace? – Yves Gourinat, Ensica

1.D. AERONAUTICS

- 1 - The case for explicit finite element analysis of fabric systems. A presentation of real world applications and results – Anthony Taylor, Irvin Aerospace Inc.
- 2 - *Modeling of an impact attenuation system for the Beagle2 Mars Lander*
Chris Huxley-Reynard, Martin Baker Aircraft Co Ltd

2.D. SHIP

- 1 - Crashworthiness analysis of a lock gate impacted by three different river ships
Hervé Le Sourne, French Shipbuilding Research Institute
- 2 - Estimation of the transverse crush resistance of a section of the T23 Frigate
GS Kalsi, Royal Military College of Science, Cranfield University

3.D. SPH

- 1 - S.P.H.: A solution to avoid using erosion criterion? - Jean-Luc Lacomme, Dynalis
- 2 - Simulations of hyper velocity impacts with Smoothed Particule Hydrodynamics
Dominique Lacerda, Dynalis

1.E. AUTOMOTIVE

- 1 - Improved spotweld simulation with LS-DYNA-Numerical simulation and comparison to experiments
Karl Schweizerhof, CAD-FEM GmbH
- 2 - Modeling of an automobile tire using LS-DYNA3D - Wayne Hall, University of Warwick
- 3 - Crash-simulation of hat-sections reliability of the numerical model
Paul Du Bois, consulting engineer & Thomas Franck, Daimler-Chrysler

2.E. EXPLOSION

- 1 - In-bore behaviour of large calibre armour piercing fin stabilised discarding sabot projectiles
Nicolas Eches, GIAT Industries
- 2 - Some examples of energetic material modeling with LS-DYNA – Michel Quidot, SNPE Propulsion
- 3 - On techniques of simulating effects of cavitation associated with the interaction between structures and underwater explosions using LS-DYNA – Qingwei Ma, University College London

3.E. MISCELLANEOUS

- 1 - Improving the impact resistance of masonry parapets – Gregor Beattie, Liverpool University
- 2 - A seismic post elastic behaviour of spherical tanks - Pascal Pourcel, Technip
- 3 - Quasi-static limit load analysis by LS-DYNA in combination with Ansys – Wilhelm Rust, CAD-FEM GmbH

1.F. AUTOMOTIVE

- 1 - Development and validation of a US side impact moveable deformable barrier FE model
Abdullatif Zaouk, FHWA/NHTSA National Crash Analysis Center
- 2 - *On vehicle impact on roadside barrier – Klas Engstrand, Engineering Research AB*
- 3 - Aspects of seat belt material simulation – Claudio Pedrazzi, TRW
- 4 - Using CAE to evaluate structural foam alternatives in the B-pillar and bumper designs
Sameer Gupta, Honda R&D

2.F. FORMING

- 1 - Input parameters for springback simulation using LS-DYNA – Bradley N. Maker, LSTC
- 2 - ²Parallel engineering simulations based on forming simulation of a heat exchanger plate
Per Gabrielson, Alfa Laval Lund AB
- 3 - State-of-the-Art in the use of (LS-DYNA) Forming simulation in hydroforming and preceding processes
Andreas Haas, University of Applied Sciences, Aalen
- 4 - FEM-Process-Simulation of hydromechanical deep-drawing
Matthias Aust, Institute for Metal Forming Technology (IFU) University of Stuttgart

3.F. NEW DEVELOPMENTS

- 1 - *Computationally efficient micromechanical woven fabric composite material model for crash and impact simulation – Ala Tabiei, University of Cincinnati*
- 2 - Numerical simulations of ductile failure in extruded aluminium alloys using a coupled model of elasto-plasticity and damage – O.S. Hopperstad, SIMLab, Norwegian University of Science and Technology
- 3 - *New shell element for analysis of sandwich structures and crashworthiness of composite materials
Ala Tabiei, University of Cincinnati*
- 4 - *The development of an improved material model for aluminium Honeycomb barriers
Klaus Radtke, GNS mbH*

POSTERS

Numerical simulation of the wood response to the high velocity loading
J. Voldrich, Mendel University of Agriculture and Forestry

Optimization of stiffened laminated composite cylindrical panels in buckling and postbuckling analysis
Aleksandr Korjakin, Riga Technical University

Numerical and experimental study of safety net systems for human and equipment security
Fayçal Ben Yahia, Dynalis