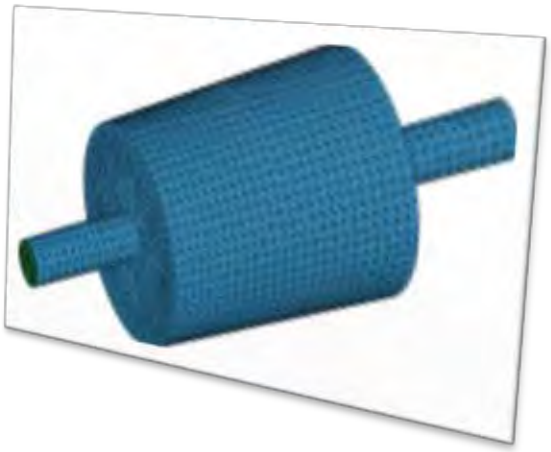
FEA Information Engineering Solutions

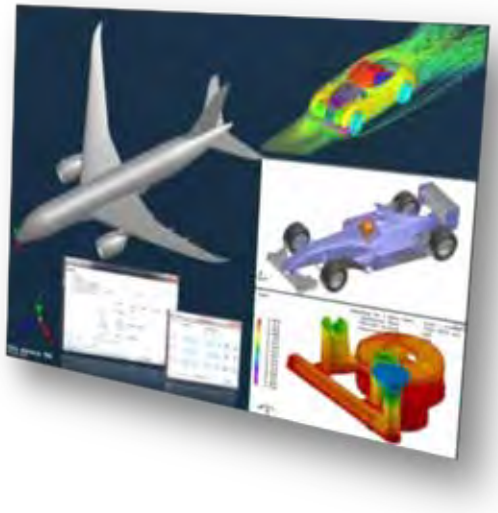
Volume 3, Issue 12, December 2014

FEA Information China Website

LS-DYNA® Implicit



SIMLYZER



ESI Visual-Environment 10.0

Finite Element Analysis * Hardware * Software * Cloud * Consulting * CAD * CAE Distribution* * Implicit * Explicit *Applications * Press Releases * Events * Training

FEA Information Inc. is a publishing company founded April 2000, incorporated in the State of California July 2000, and first published October 2000. The initial publication, FEA Information News continues today as FEA Information Engineering Solutions. The publication's aim and scope is to continue publishing technical solutions and information, for the engineering community.

FEA Information Inc. Publishes:

FEA Information Engineering Solutions
FEA Information Engineering Journal
FEA Information China Engineering Solutions

FEA Information Engineering Solutions:

A monthly publication in pdf format sent via e-mail, additionally archived on the website FEA Publications. www.feapublications.com

FEA Information China Engineering Solutions

The first edition was published February 2012. It is published in Simplified and Traditional Chinese in pdf format.

To sign up for the Traditional, or Simplified edition write to
yanhua@feainformation.com

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Available on www.feaiej.com


BETA
CAE Systems SA


CRAY


eta


JSOL


Oasys
The Software House of Arup


GOMPUTE
A GRIDCORE COMPANY

logo courtesy - Lancemore

Table of Contents

Announcements

For participation, contact Anthony Giaccana agiac99@aol.com

January

Thursday 22nd January 2015

12th Annual UK Oasys LS-DYNA Users' Meeting

Arup Campus, Solihull, UK

Courtesy Publishing - page 58

Elemance distributor of the Global Human Body Models Consortium family of virtual models of the human body.

Happy Holiday from Cody and FEA Information Inc.

Sincerely, Marsha Victory - Trent Eggleston - Suri Bala
FEA Information Inc. USA edition

Merry Xmas From The Victory Herd










Thank you to all our participants and readers. Your support makes it possible for us to continue with the rescues we have, plus donate to other rescue organizations.

We wish you the best Holiday and New Year.

Marsha & Don Victory

Shane, Paja,
Cody, Quincy & Dusty
Hero, Timber
Heidi (bunny)

Molly & Romo
Romo (rescued Dec. 10, 2014)

The twelfth in a series of update meetings for Oasys LS-DYNA Users will be held at the Arup office in Solihull, UK, on **Thursday 22nd January 2015**.

As in previous years this event will bring together around 100 UK users of the Oasys and LS-DYNA software to provide information on upcoming features of Oasys and LS-DYNA, and to learn more about current and new applications, as well as other related software products.

We are looking forward to talks from the Oasys team at Arup as well as special guest speakers, details to be confirmed.

The event will be followed by a complimentary meal at The Boot Inn in Lapworth. Please note that The Boot Inn has a limited capacity so please ensure you register in advance to ensure your place at the evening meal.

Registration: This event is free of charge. To register for the event and the evening meal simply send an email with your company/affiliation and contact details to Alison Harper. Please also let us know if you have any particular dietary requirements when you register.

12th Annual UK Oasys LS-DYNA Users' Meeting

Location:
Arup Campus, Solihull, UK

Please note: in line with our company sustainability policy we do not plan to provide printed copies of the presentations for each attendee at the event; the presentations will be made available to download after the event. If you particularly require a printed copy on the day please let us know when you register.

The latest edition of ESI's multi-domain simulation platform delivers key improvements for CFD users

Visual-Environment 10.0 now offers a dedicated user environment for open source code OpenFOAM®

Paris, France – December 15, 2014 – ESI Group, pioneer and world-leading solution provider in Virtual Prototyping for manufacturing industries, announces the new version of Visual-Environment 10.0. Designed to support the most demanding CAE requirements, Visual-Environment is a comprehensive simulation platform enabling faster decision- making across multiple domains. The latest version Visual-Environment 10.0 enables the swift integration of calculations using open source CFD software OpenFOAM®.

Visual-Environment 10.0 provides a very intuitive interface for all CFD engineers. It allows them to accelerate the preparation of most common CFD calculations, including airflow for external aerodynamics, internal airflow for underhood and climate control, and investigation of flow around rotating bodies. More specifically, this new version of Visual-Environment provides users of the well-known open source CFD modules of OpenFOAM® with the first compatible industrial grade platform: enabling seamless CAD import, easy model set-up, pre- and post-processing, macro-capabilities and customization.

Visual-Environment 10.0 enables design engineers to get quick answers for various design options, on a daily basis. Once a CFD expert has defined an analysis process, fellow design engineers can benefit from automated meshing, set-up and processing, enabling them to obtain CFD models in a third of the time, with no supervision and with minimum training.

With this latest release, Visual-Environment 10.0 platform now supports additional formats generated by third-party CAD tools: ACIS, Solid Edge, Inventor and SolidWorks. Visual-Environment users can now import files from these third party software, without the need for time- consuming conversions.

In this latest version, special attention has been paid to calculation speed and robustness, to deliver on an industrial scale. "*AMD and ESI have tested and certified the use of Visual-Environment 10.0 with its latest professional graphics card", explains* **Antoine Reymond**, *Strategic Alliances Manager at AMD. "AMD FirePro™ graphics are tested against a battery of simulations and real-world scenarios using rigorous certification processes to ensure their readiness for demanding professional use."* He continues: *"Working hand-in-hand with ESI, AMD is able to provide Visual-Environment 10.0 users with a certified driver, delivering robust and feature-rich graphical support to manage Virtual Prototypes and large-scale engineering simulation models, as required for every day Finite Element analysis and for Computational Fluid Dynamics."*

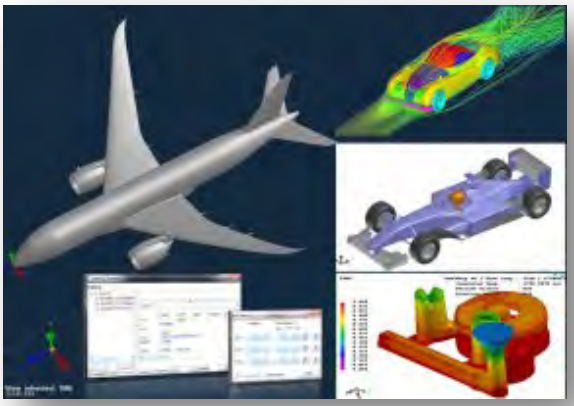

Image: Visual-Environment 10.0 is an open simulation platform that enables the management of Virtual Prototyping processes efficiently in a single environment.

For more information on Visual-Environment 10.0, please visit www.esi-group.com/Visual - Environment

For more ESI news, visit: www.esi-group.com/press

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About ESI Group

ESI is a world-leading provider of Virtual Prototyping software and services with a strong foundation in the physics of materials and Virtual Manufacturing.

Founded over 40 years ago, ESI has developed a unique proficiency in helping industrial manufacturers replace physical prototypes by virtually replicating the fabrication, assembly and testing of products in different environments. Virtual Prototyping enables ESI's clients to evaluate the performance of their product and the consequences of its manufacturing history, under normal or accidental conditions. By benefiting from this information early in the process, enterprises know whether a product can be built, and whether it will meet its performance and certification objectives, before any physical prototype is built. To enable customer innovation, ESI's solutions integrate the latest technologies in high performance computing and immersive Virtual Reality, allowing companies to bring products to life before they even exist.

Today, ESI's customer base spans nearly every industry sector. The company employs about 1000 high-level specialists worldwide to address the needs of customers in more than 40 countries. For further information, visit www.esi-group.com

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http://investors.cray.com/phoenix.zhtml?c=98390&p=irol-newsArticle&ID=1999247

Cray Awarded $30 Million Contract From the Department of Defense High Performance Computing Modernization Program

SEATTLE, WA -- (Marketwired) -- 12/15/14 -- Global supercomputer leader Cray Inc. (NASDAQ: CRAY) today announced the Department of Defense (DoD) High Performance Computing Modernization Program (HPCMP) has awarded the Company a $30 million supercomputer contract for two Cray® XC40™ supercomputers and two Cray Sonexion® storage systems.

The Cray systems will be located at the U.S. Navy DoD Supercomputing Resource Center (Navy DSRC) at the John C. Stennis Space Center in Mississippi. The Navy DSRC is a premier provider of high performance computing services and support to scientists and engineers at the DoD, and is one of the five supercomputing centers established by the HPCMP. The Navy DSRC will use the Cray XC40 supercomputers to produce high-resolution, coastal-ocean circulation and wave-model oceanography products supporting Navy and DoD operations worldwide.

"The acquisition of these Cray XC40 systems is part of an historic year for the HPCMP," said Christine Cuicchi, Department of Defense High Performance Computing Modernization Program Associate Director for HPC Centers. "We have now purchased over $150 million of supercomputers within the 2014 calendar year. The XC40s provide a 2.5x increase in the Navy DoD Supercomputing Resource Center's capability. These supercomputers are vital to groundbreaking science and research discoveries in support of the U.S. Department of Defense."

In operation for more than 20 years, the DoD HPCMP remains focused on its mission to accelerate technology development and transition into superior defense capabilities through the strategic application of high performance computing (HPC), networking and computational expertise. The HPCMP provides the people, expertise and technologies that increase the productivity of the DoD's Research, Development, Test and Evaluation community. Cray has worked closely with the HPCMP since its inception.

"The DoD High Performance Modernization Program remains committed to its vision of using advanced computational environments to solve the DoD's most critical mission challenges, and we are honored that, once again, the program has turned to Cray," said Peter Ungaro, president and CEO of Cray. "This shared passion for providing users with powerful and highly-advanced supercomputing technologies speaks to the long, collaborative partnership we are proud to have built with the Navy DSRC and across the HPCMP."

Cray XC40 supercomputers are engineered to meet the performance challenges of today's most demanding HPC users. Special features of the Cray XC40 supercomputer include: the industry-leading Aries system interconnect; a Dragonfly network topology that frees applications from locality constraints; optional DataWarp applications I/O flash SSD accelerator technology; innovative cooling systems to lower customers' total cost of ownership; the next-generation of the scalable, high performance Cray Linux Environment supporting a wide range of applications; Cray's HPC optimized programming environment for improved performance and programmability, and the ability to handle a wide variety of processor types in a tightly-integrated system infrastructure.

Cray's Sonexion storage solution combines Cray's Lustre expertise with a tightly integrated, unique design that allows for maximum scalability and performance. Management and operations are simplified through an appliance design with all storage components including software, storage and infrastructure.

Awarded by US Army Engineering and Support Center, Huntsville, the contract is valued at more than $30 million in product revenue and also includes four separately priced one year options for maintenance. The systems are expected to be installed in 2015.

For more information on the Cray XC series of supercomputers and Cray Sonexion storage systems, please visit the Cray website at www.cray.com .

About the DoD High Performance Computing Modernization Program: The HPCMP provides Department of Defense supercomputing capabilities, high-speed network communications and computational science expertise that enable DoD scientists and engineers to conduct a wide-range of focused research, development and test activities. This partnership puts advanced technology in the hands of U.S. forces more quickly, less expensively, and with greater certainty of success. Today, the HPCMP provides a complete advanced computing environment for the DoD that includes unique expertise in software development and system design, powerful high performance computing systems, and a premier wide-area research network.

The HPCMP is managed on behalf of the Department of Defense by the U.S. Army Engineer Research and Development Center.

For more information, please visit the DoD HPCMP website at www.hpc.mil .

About Cray Inc.: Global supercomputing leader Cray Inc. (NASDAQ: CRAY) provides innovative systems and solutions enabling scientists and engineers in industry, academia and government to meet existing and future simulation and analytics challenges. Leveraging more than 40 years of experience in developing and servicing the world's most advanced supercomputers, Cray offers a comprehensive portfolio of supercomputers and big data storage and analytics solutions delivering unrivaled performance, efficiency and scalability. Cray's Adaptive Supercomputing vision is focused on delivering innovative next-generation products that integrate diverse processing technologies into a unified architecture, allowing customers to meet the market's continued demand for realized performance. Go to www.cray.com for more information.

Safe Harbor Statement: This press release contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934 and Section 27A of the Securities Act of 1933, including, but not limited to, statements related to the timing of delivery of the systems purchased by the DoD HPCMP and Cray's ability to deliver systems that meet the DoD HPCMP's requirements. These statements involve current expectations, forecasts of future events and other statements that are not historical facts. Inaccurate assumptions and known and unknown risks and uncertainties can affect the accuracy of forward-looking statements and cause actual results to differ materially from those anticipated by these forward-looking statements. Factors that could affect actual future events or results include, but are not limited to, the risk that the systems required by the DoD HPCMP are not delivered in a timely fashion or do not perform as expected and such other risks as identified in the Company's quarterly report on Form 10-Q for the quarter ended September 30, 2014, and from time to time in other reports filed by Cray with the U.S. Securities and Exchange Commission. You should not rely unduly on these forward-looking statements, which apply only as of the date of this release. Cray undertakes no duty to publicly announce or report revisions to these statements as new information becomes available that may change the Company's expectations.

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206/701-2123 pr@cray.com

Cray Investors: Paul Hiemstra
206/701-2044 ir@cray.com
Source: Cray Inc.

We would like to invite you to the Numerical Simulation Conference between June 24th and 26th, 2015.

33rd CADFEM Users' Meeting

When it comes to numerical simulation in product development, the place to be is the city of Bremen, Germany.

We would like to invite you to the Numerical Simulation Conference between June 24th and 26th, 2015. As a simulation expert, beginner or simply an interested party, you can experience the complete range of simulation technology as a tool for quality, innovation and time-saving in product developments of today and the future.

You can expect a packed and varied agenda at our ANSYS Conference & 33rd CADFEM Users' Meeting – from ANSYS, from CADFEM and from the world of simulation: Technology updates, contributions from users from various sectors and fields of simulation, as well as compact seminars on topical subjects. You can also look forward to the big CAE exhibition, the intensive exchange and dialog with like-minded people and as always an attractive supporting program. Let the conference inspire you to new ideas. Or why not inspire others by making your own contribution to one of the biggest conferences on numerical simulation in Europe. We would like to invite you to send us your papers on the named topics for Thursday, June 25th. If you register before February 2nd, 2015, you will profit from an early-bird discount of 10% either as a speaker or participant. We are looking forward to some great papers, curious trade visitors and exhibitors with some interesting special offers.

Find out everything you need to know about the event at www.usersmeeting.com/en

Your CADFEM GmbH & ANSYS Germany GmbH

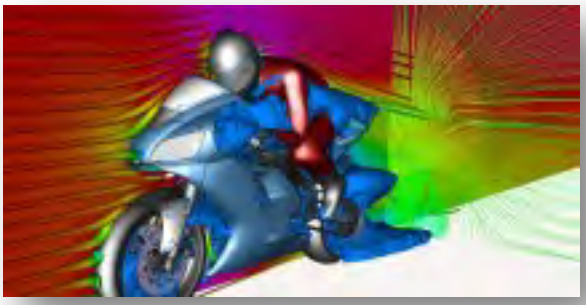
Kaizenat is glad to announce 2015 schedule of LS-DYNA classes to be presented in Bangalore and Pune.

The details about the trainings offered are given below

LS-DYNA Training Schedule	
Topic	**Date**
LS-DYNA Software Training	Jan 7-9
LS-DYNA Implicit Training	Jan 22-23
LS-DYNA Software Training	Feb 11-13
Contact Modelling Advanced Training	Feb 19-20
LS-DYNA Software Training	Mar 11-13
Material Modelling Advanced Training	Mar 19-20
LS-DYNA Software Training	Apr 15-17
Advanced Crash Analysis	Apr 23-24
LS-DYNA Software Training	May 13-15
Airbag Deployment Application	May 21-22
LS-DYNA Software Training	Jun 10-12
Advanced Material Forming Analysis	Jun 18-19

Information & Agenda:

Classes generally start at 9:30 a.m. and end at 5:00 p.m. Access to computer for workshop exercises and lunch each day are included with the registration. For details on agenda please Click Here and to register for the training please Click Here. For any queries/clarification please contact us @ support@kaizenat.com



BETA CAE Systems
TOP CAE Corporation
Invitation

2015 BETA CAE Japan Open Meeting
Shin Yokohama Prince Hotel
Shin Yokohama, Japan
February 10, 2015

Invitation

BETA CAE Systems S.A., a leading contemporary industry supplier of CAE software, and its business partner in Japan, TOP CAE Corporation, have the pleasure to invite you to the 2015 Open Meetings in Shin Yokohama.

During this event you will have the opportunity to participate in sessions on the latest developments and real case applications, on various CAE disciplines and industries, of ANSA, μETA, and our new product SPDRM (Simulation Process Data and Resources Manager).

A number of very interesting presentations from guest speakers will feature the event's agenda, showing impressive applications of our software in different sectors. BETA CAE Systems and TOP CAE Corporation would like to extend their appreciation to our customers who accepted our invitation to contribute to the success of this event with their presentations.

During the event, the technical discussions and demonstrations will offer you the opportunity to discuss with our engineers the software features, their application, and the future developments. A team of CAE experts from BETA CAE Systems and TOP CAE Corporation will be pleased to meet you in person and exchange knowledge, experience and visions.

There is no participation fee for the event.
Please, register by email no later than Friday January 30th, 2015 to info@top-cae.co.jp.

The attire will be business casual.

All presentations are in Japanese, unless marked as: [E]* for English with translation to Japanese or [E] for English only.

The event and reception are organized and hosted by TOP CAE Corporation.

Agenda subject to change without notice.

Among the many presentations will be:

Opening Speech
AkiraTakagi, President, TOP CAE Corporation

BETA CAE Systems products suite in the Automotive industry [E]*

Dimitris Angelis, President, BETA CAE Systems

Keynote Speech:
Toyota Motor Corporation's 30years history in Crash Analysis

Tsuyoshi Yasuki, Vehicle CAE Group, Toyota Motor Corporation

Invited Speech:

Efforts of Nissan Techno Group to improve QCT of making CAE model

Trinh An Phong, Vehicle CAE Center, Nissan Techno Vietnam CO.,LTD

Invited Speech:

Efforts to promote efficiency of CAE analysis result processing by using μETA in auto transmission

Takuya Hosoe, CAE developing technology group, AW Engineering CO., LTD

Venue in Shin Yokohama

Shin Yokohama Prince Hotel
3-4 Shin Yokohama
Kohoku-ku, Yokohama
Kanagawa, 222-8533 Japan
Tel: +81-(0)45-471-1111
URL: www.princehotels.com

Information & Registration

Tel: +81-(0)45-478-3840
Email: info@top-cae.co.jp

Important dates

Registration until: Friday January 30, 2015
Event: Tuesday February 10, 2015

FEA Information Inc.

Contact yanhua@feainformation.com for URL.
Operated by Yanhua Zhao, Manager/Chief Editor of
our China based magazine FEA Information Engineering Solutions China Edition. .

The website is dedicated to China FEA Solutions and includes:

- .Download all FEA inforation version that have been published since 2012
- LS-DYNA China distributor info
- FEA Information Chinese version participants
- FEA Information and LS-DYNA websites list

For information to become part of FEA Information China Solutions contact yanhua@feainformation.com for information to become a participant.

Catherine Pringle - cpringle@penguincomputing.com **for complete article with high res. graphics**

News from the Iceberg

Penguin is capping off another record-breaking year and the great turnout we got at SC14 in New Orleans shows why. People flocked to our booth to see our products, demos and speakers. With our unmatched Linux expertise, Penguin is a one-stop shop for HPC and enterprise customers, providing solutions for a wide array of computing needs and user profiles:

- HPC and cloud solutions optimized for industry-specific uses
- High-powered workstations for individual power users
- Highly power-efficient server platforms for enterprise computing
- Private and public cloud solutions, including hybrid options.

\

POD – Our HPC Cloud now with Remote Viz

We premiered our Scyld Cloud Workstation at SC14 and it was a huge hit. Now you can run your simulations right from your desktop on POD!

- 3D Accelerated Remote Virtual Workstation, powered by NVIDIA GRID Technology
- Clientless - nothing to download. Works in any HTML5 browser.
- Low Bandwidth. Use it over your Wi-Fi.
- Post Process your results without downloading!

Run MATLAB, Ansys Workbench, LS-PrePost, STAR-CCM+, Paraview and more, interactively in your browser

cpringle@penguincomputing.com **/ 415-954-2812**
For more information about POD and remote viz; email or call to schedule a demo

Catherine Pringle - cpringle@penguincomputing.com **for complete article with high res. graphics**

Open Solutions for Performance & Efficiency

Penguin Computing is an active, contributing member to the OCP community and has been fueling innovation by providing Open Solutions to our customers for 15 years.

We have OCP-ready HPC solutions that deliver:

- Higher power: 30kW+, compared to the current OCP limit of ~12kW
- Higher density: 3 servers per 1 rack unit, versus OCP standard of 2
-

Relion 2908GT

- HPC Server Designed for Next Generation Datacenters
- High Density GPU server, 8 GPGPUs in 2U
- Latest Intel Xeon Processor E5-2600 v3
- Supports K80 Nvidia Tesla Card

Tundra – OpenHPC Architecture for the Open Compute Project

- High Performance Computing in OCP form factor
- Powered by the Intel Xeon Processor E5-2600 v3 series
- Unparalleled density of compute nodes in a rack
- Fits same footprint as traditional EIA rack

Catherine Pringle - **cpringle@penguincomputing.com for complete article with high res. graphics**

Arctica Open Switches - For the Software-Defined Data Center

- 1/10/40GB Ethernet Switches
- Vendor Independence
- High Performance - Full Bisection Bandwidth, Line rate L2/L3 Throughput
- Supports Trident II and x86 Architectures
- For High Performance Clusters and Cloud Datacenters

Penguin Computing, Inc.
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Storage - Scalable & Tiered for HPC, Big Data and Datacenters

- Enterprise grade solutions delivered in partnership with EMC
- High performance solutions using Infiniband, Arctica 10/40GbE
- Support for NFS, Lustre and CEPH

Call for Papers -

10th European LS-DYNA Conference

June 15 - 17 2015, Würzburg, Germany

We kindly invite all users of LS-DYNA, LS-OPT, LS-PrePost and LS-TaSC to take advantage of this fantastic opportunity to showcase their work. The Conference is your chance to talk with industry experts, catch up with colleagues and enjoy time exploring new ideas. In addition, attendees can meet with exhibitors to learn about the latest hardware and software trends, as well as additional services relating to the finite element solver LS-DYNA, the optimization codes LS-OPT and LS-TaSC, and the pre- and postprocessor LS-PrePost. Make sure that you will be part of the conference by submitting your abstract soon!

Conference website:
www.dynamore.de/ls-dyna2015-e
Abstract online submission:
www.dynamore.de/eu-ls-dyna-abstract-e
Flyer (pdf):
www.dynamore.de/c4p-ls-dyna2015-e

Abstract submission
Please submit an abstract (300 words) by E-Mail to forum@dynamore.de or online at http://www.dynamore.de/ls-dyna2015

Important dates

Abstract submission:	13 February 2015
Author notification:	6 March 2015
Final paper deadline:	20 April 2015

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Fax. +49 (0) 7 11 - 45 96 00 – 29
E-Mail: forum@dynamore.de
http://www.dynamore.de/ls-dyna2015

Venue:
Würzburg is a beautiful historical city and a UNESCO World Cultural Heritage site, which is easily accessible from Frankfurt International Airport by train or by car. The Congress Centrum at the Maritim Hotel Würzburg is centrally located directly on the banks of the river Main, offering a splendid view of the Marienberg fortress. Visitors can comfortably explore the baroque inner city with its numerous sights by foot.

We are looking forward to welcoming you in Würzburg in 2015!

LSTC IMPLICIT LS-DYNA Part I LSTC

Full article starts January on recent developments

LS-DYNA Implicit has the ability of solving problems in crash, NVH, and durability with the same model definition.

The linear and nonlinear implicit capabilities are very scalable using LS-DYNA.

LS-DYNA Implicit has the ability of solving problems in crash, NVH, and durability with the same model definition.

Currently in most companies LS-DYNA is used for crash, a different code for NVH and durability, and a different code for nonlinear powertrain. Each has unique input. With LS-DYNA the same input can be used for all 3 applications. Additionally, LS-DYNA scales better then the alternatives and will result in much shorter run times.

Available presentation from Yun Huang & Zhe Cui contact sales@lstc.com
Updated frequency domain analysis in LS-DYNA

1.Introduction
2.ATV and MATV for BEM acoustics
3.Incident acoustic wave
4.Frequency dependent complex sound speed
5.Fatigue analysis based on SSD
6.Conclusion & future work

*FREQUENCY_DOMAIN_ACOUSTIC_BEM_{OPTION}
*FREQUENCY_DOMAIN_ACOUSTIC_FEM
*FREQUENCY_DOMAIN_ACOUSTIC_INCIDENT_WAVE
*FREQUENCY_DOMAIN_ACOUSTIC_SOUND_SPEED
*FREQUENCY_DOMAIN_FRF
*FREQUENCY_DOMAIN_RANDOM_VIBRATION_{OPTION}
*FREQUENCY_DOMAIN_RESPONSE_SPECTRUM
*FREQUENCY_DOMAIN_SSD_{OPTION}

Applications

- NVH of automotive and airplanes
- Acoustic design and analysis of buildings and products
- Defense industry
- Fatigue of machines and engines
- Safety evaluation of civil and hydraulic buildings
- Earthquake engineering
- Offshore industries
- Many others…

For complete sections and information contact sales@lstc.com

http://blog.d3view.com/

SIMLYZER™

Simlyzer® helps in intelligent unaRended simulation data extraction, analysis and storage

d3VIEW is a web based platform that reduces over 80% of post-simulation time and effort by providing out-of-the box data extraction, transformation and powerful interactive visualizations to design better products.

Benefits: As vast amount of data is generated from simulations, Engineers and Scientists spend a lot of time in non-engineering tasks before arriving at a design decision based on simulation results to improve the product.
d3VIEW provides a single platform that enables users to go from Data to Decision in a significantly reduced time while providing deeper insights using powerful coordinated visualizations of the data.

Features

- HPC Job Lifecycle Monitoring and Interactive Results Visualizer.
- Interactive HPC Resource Data Visualizer.
- Intelligent Unsupervised Simulation Data Extractor and Analyzer.
- Workspaces (Projects) to manage Teams, Documents and Tasks.
- Library of Industry specific Smart Templates.
- Plugin-Free 3D Data Renderer.
- Generic Datasets to Study, Analyze Big Data.› Export Data to PPT, PDF, Word and Excel.

SIMLYZER™ - Simulation Data Extraction and Analysis Technology. As a core technology, d3VIEW's Simlyzer® helps in intelligent unaRended simulation data extraction, analysis and storage using existing hardware to provide deep insights into every single simulation.
Our patent pending technology is based on years of research and development and has been honed over several years of in-house and real-world testing.
Simlyzer® has proven to work on any product and can be extended to non-simulation data such as physical test data and material data.

SIMLYTIKS™ - Hybrid data aggregator with powerful interactive visualization.
Aggregate data from simulations and tests and use rich interactive visualizations to understand key measure so you can make decisions quickly and smartly. You can tie the data Machine Learning software like LS-OPT in newer release of d3VIEW to further enrich your understanding of data.

www.dynasupport.com/ **LS-DYNA Support**	Answers to basic and advanced questions that might occur while using LS-DYNA. New releases/ongoing developments.
www.dynalook.com/ **Papers**	Papers from LS-DYNA User Conferences with search option.
www.lsoptsupport.com/ **LS-OPT**	LS-OPT, developed by LSTC to interface with LS-DYNA
www.dummymodels.com/ **Dummy Models**	Detailed information on dummy models for LS-DYNA
www.topcrunch.org/ **Benchmarks**	Track the aggregate performance trends of high performance computer systems, with real data
www.dynaexamples.com/keyword-search **LS-DYNA Examples**	Examples for specific LS-DYNA keywords, with search option

**JSOL Cloud Computing **

JSOL Corporation, a Japanese LS-DYNA distributor for Japanese LS-DYNA customers.

LS-DYNA Limited License

$100 US dollars, 10,000 elements, not limited on capabilities, includes LS-DYNA, LS-OPT, LS-PrePost, LSTC ATD and Barrier models.

Cray – Abdullah University - providing multiple Cray Systems

BETA CAE Systems S.A. **www.beta-cae.gr**

BETA CAE Systems S.A.– ANSA

An advanced multidisciplinary CAE pre-processing tool that provides all the necessary functionality for full-model build up, from CAD data to ready-to-run solver input file, in a single integrated environment. ANSA is a full product modeler for LS-DYNA, with integrated Data Management and Process Automation. ANSA can also be directly coupled with LS-OPT of LSTC to provide an integrated solution in the field of optimization.

BETA CAE Systems S.A.– μETA

Is a multi-purpose post-processor meeting diverging needs from various CAE disciplines. It owes its success to its impressive performance, innovative features and capabilities of interaction between animations, plots, videos, reports and other objects. It offers extensive support and handling of LS-DYNA 2D and 3D results, including those compressed with SCAI's FEMZIP software

Solutions for:

Process Automation - Data Management – Meshing – Durability - Crash & Safety NVH - CFD - Thermal analysis - Optimization - Powertrain Products made of composite materials - Analysis Tools -

Maritime and Offshore Design - Aerospace engineering - Biomechanics

CRAY

www.cray.com

Cray CS300-AC Cluster Supercomputer

The Cray CS300-AC cluster supercomputer features an air-cooled architecture based on blade server or rackmount server building block platforms. The system is built for capacity and data-intensive workloads. It delivers turnkey high performance computing with a broad range of flexible system configuration options.

The CS300-AC system features two new preconfigured ready-to-go solutions, the CS300 shared memory parallel and the CS300 large memory systems.

Cray CS300-LC Cluster Supercomputer

The Cray CS300-LC cluster solution features a direct liquid-cooled architecture using warm water heat exchangers instead of chillers. It delivers a turnkey, energy-efficient solution that reduces datacenter power and cooling operation costs for faster ROI while addressing capacity and data-intensive workloads.

Cray XC30 Supercomputer Series

The Cray XC30 family delivers on Cray's commitment to an adaptive supercomputing architecture that provides both extreme scalability and sustained performance. The flexibility of the Cray XC30 platform ensures that users can configure the exact machine to meet their specific requirements today, and also remain confident they can upgrade and enhance their system to address the demands of the future.

Cray Sonexion Scale-out Lustre Storage System

Brought to you by Cray, the world's leading experts in parallel storage solutions for HPC and the technical enterprise, the Cray Sonexion is a fully integrated, modular and compact scale-out storage system for Lustre.

DatapointLabs **www.datapointlabs.com**

Testing over 1000 materials per year for a wide range of physical properties, DatapointLabs is a center of excellence providing global support to industries engaged in new product development and R&D.

The compary meets the material property needs of CAE/FEA analysts, with a specialized product line, TestPaks®, which allow CAE analysts to easily order material testing for the calibration of over 100 different material models.

DatapointLabs maintains a world-class testing facility with expertise in physical properties of plastics, rubber, food, ceramics, and metals.

Core competencies include mechanical, thermal and flow properties of materials with a focus on precision properties for use in product development and R&D.

Engineering Design Data including material model calibrations for CAE Research Support Services, your personal expert testing laboratory Lab Facilities gives you a glimpse of our extensive test facilities Test Catalog gets you instant quotes for over 200 physical properties.

ETA – Engineering Technology Associates **www.eta.com**

etainfo@eta.com

Inventium Suite™

Inventium Suite™ is an enterprise-level CAE software solution, enabling concept to product. Inventium's first set of tools will be released soon, in the form of an advanced Pre & Post processor, called PreSys.

Inventium's unified and streamlined product architecture will provide users access to all of the suite's software tools. By design, its products will offer a high performance modeling and post-processing system, while providing a robust path for the integration of new tools and third party applications.

PreSys

Inventium's core FE modeling toolset. It is the successor to ETA's VPG/PrePost and FEMB products. PreSys offers an easy to use interface, with drop-down menus and toolbars, increased graphics speed and detailed graphics capabilities. These types of capabilities are combined with powerful, robust and accurate modeling functions.

VPG

Advanced systems analysis package. VPG delivers a unique set of tools which allow engineers to create and visualize, through its modules--structure, safety, drop test, and blast analyses.

DYNAFORM

Complete Die System Simulation Solution. The most accurate die analysis solution available today. Its formability simulation creates a "virtual tryout", predicting forming problems such as cracking, wrinkling, thinning and spring-back before any physical tooling is produced

ESI Group **www.esi-group.com**

Visual-Environment: An integrated suite of solutions which operate either concurrently or standalone within a common environment. It aims at delivering an open collaborative engineering framework. As such, it is constantly evolving to address various disciplines and available solvers.

Visual-Crash is a dedicated environment for crash simulation: It helps engineers get their job done in the smoothest and fastest possible way by offering an intuitive windows-based graphical interface with customizable toolbars and complete session support.

For LS-DYNA users, Visual-Crash DYNA allows to focus and rely on high quality digital models, from start to finish as it addresses the coupling with competitive finite element or rigid body based software. This very open and versatile environment simplifies the work of CAE engineers across the enterprise by facilitating collaboration and data sharing.

Further tools are integrated in Visual-Environment enhancing CAE engineers work tasks most efficiently.

Visual-Mesh generates 1D, 2D and 3D elements for any kind of simulation. Visual-Mesh provides automatic and guided surfaces clean up, application specific mesh generation and intuitive post mesh editing features..

Visual-Viewer is a complete, productive and innovative post-processing environment for CAE applications.

Visual-Viewer delivers a dedicated plotting and animation control solution. It offers a multi page, multi plot environment, allowing to group data into pages and plots. It is designed with a Windows GUI based on an intuitive and sleek user interface.

Visual-Process Executive is an advanced CAE environment for process customization and automation.

VisualDSS is an End-to-End Decision Support System for CAE. Manufacturers widely resort to Simulation-Based Design to gain a competitive edge in product development.

Gompute on demand®/ Gridcore AB Sweden

www.gompute.com **www.gridcore.se**

Gompute is owned, developed and operated by Gridcore AB in Sweden. Founded in 2002, Gridcore is active in three areas: Systems Integration, Research & Development and HPC as a service.

Gridcore has wide experience of different industries and applications, developed a stable product portfolio to simplify an engineer/scientist's use of computers, and has established a large network of partners and collaborations, where we together solve the most demanding computing tasks for our customers. Gridcore has offices in Gothenburg (Sweden), Stuttgart (Germany), Durham NC (USA) and sales operations in The Netherlands and Norway.

The Gridcore developed E-Gompute software for internal HPC resources gives end users (the engineers) an easy-to-use and complete environment when using HPC resources in their daily work, and enables collaboration, advanced application integrations, remote pre/post, accounting/billing of multiple teams, license tracking, and more, accelerating our customers usage of virtual prototyping

.

JSOL Corporation **www.jsol.co.jp/english/cae/**

HYCRASH

Easy-to-use one step solver, for Stamping-Crash Coupled Analysis. HYCRASH only requires the panels' geometry to calculate manufacturing process effect, geometry of die are not necessary. Additionally, as this is target to usage of crash/strength analysis, even forming analysis data is not needed. If only crash/strength analysis data exists and panel ids is defined. HYCRASH extract panels to calculate it's strain, thickness, and map them to the original data.

JSTAMP/NV

As an integrated press forming simulation system for virtual tool shop the JSTAMP/NV meets the various industrial needs from the areas of automobile, electronics, iron and steel, etc. The JSTAMP/NV gives satisfaction to engineers, reliability to products, and robustness to tool shop via the advanced technology of the JSOL Corporation.

JMAG

JMAG uses the latest techniques to accurately model complex geometries, material properties, and thermal and structural phenomena associated with electromagnetic fields. With its excellent analysis capabilities, JMAG assists your manufacturing process

Livermore Software Technology Corp. **www.lstc.com**

LS-DYNA

A general-purpose finite element program capable of simulating complex real world problems. It is used by the automobile, aerospace, construction, military, manufacturing, and bioengineering industries. LS-DYNA is optimized for shared and distributed memory Unix, Linux, and Windows based, platforms, and it is fully QA'd by LSTC. The code's origins lie in highly nonlinear, transient dynamic finite element analysis using explicit time integration.

LS-PrePost: An advanced pre and post-processor that is delivered free with LS-DYNA. The user interface is designed to be both efficient and intuitive. LS-PrePost runs on Windows, Linux, and Macs utilizing OpenGL graphics to achieve fast rendering and XY plotting.

LS-OPT: LS-OPT is a standalone Design Optimization and Probabilistic Analysis package with an interface to LS-DYNA. The graphical preprocessor LS-OPTui facilitates definition of the design input and the creation of a command file while the postprocessor provides output such as approximation accuracy, optimization convergence, tradeoff curves, anthill plots and the relative importance of design variables.

LS-TaSC: A Topology and Shape Computation tool. Developed for engineering analysts who need to optimize structures, LS-TaSC works with both the implicit and explicit solvers of LS-DYNA. LS-TaSC handles topology optimization of large non-linear problems, involving dynamic loads and contact conditions.

LSTC Dummy Models:

Anthropomorphic Test Devices (ATDs), as known as "crash test dummies", are life-size mannequins equipped with sensors that measure forces, moments, displacements, and accelerations.

LSTC Barrier Models: LSTC offers several Offset Deformable Barrier (ODB) and Movable Deformable Barrier (MDB) model.

Oasys Ltd. LS-DYNA Environment **www.oasys-software.com/dyna**

The Oasys Suite of software is exclusively written for LS-DYNA® and is used worldwide by many of the largest LS-DYNA® customers. The suite comprises of:

Oasys PRIMER

Key benefits:

- Pre-Processor created specifically for LS-DYNA®
- Compatible with the latest version of LS-DYNA®
- Maintains the integrity of data
- Over 6000 checks and warnings – many auto-fixable
- Specialist tools for occupant positioning, seatbelt fitting and seat squashing (including setting up pre-simulations)
- Many features for model modification, such as part replace
- Ability to position and depenetrate impactors at multiple locations and produce many input decks automatically (e.g. pedestrian impact, interior head impact)
- Contact penetration checking and fixing
- Connection feature for creation and management of connection entities.
- Support for Volume III keywords and large format/long labels
- Powerful scripting capabilities allowing the user to create custom features and processes

www.oasys-software.com/dyna

Oasys D3PLOT

Key benefits:

- Powerful 3D visualization post-processor created specifically for LS-DYNA®
- Fast, high quality graphics
- Easy, in-depth access to LS-DYNA® results
- Scripting capabilities allowing the user to speed up post-processing, as well as creating user defined data components

Solutions	Participant	Solutions

Oasys T/HIS

Key benefits:

- Graphical post-processor created specifically for LS-DYNA®
- Automatically reads all LS-DYNA® results
- Wide range of functions and injury criteria
- Easy handling of data from multiple models
- Scripting capabilities for fast post-processing

Oasys REPORTER

Key benefits:

- Automatic report generation tool created specifically for LS-DYNA®
- Automatically post-process and summarize multiple analyses
- Built-in report templates for easy automatic post-processing of many standard impact tests

Shanghai Hengstar

www.hengstar.com

Center of Excellence: Hengstar Technology is the first LS-DYNA training center of excellence in China. As part of its expanding commitment to helping CAE engineers in China, Hengstar Technology will continue to organize high level training courses, seminars, workshops, forums etc., and will also continue to support CAE events such as: China CAE Annual Conference; China Conference of Automotive Safety Technology; International Forum of Automotive Traffic Safety in China; LS-DYNA China users conference etc.

On Site Training: Hengstar Technology also provides customer customized training programs on-site at the company facility. Training is tailored for customer needs using LS-DYNA such as material test and input keyword preparing; CAE process automation with customized script program; Simulation result correlation with the test result; Special topics with new LS-DYNA features etc..

Distribution & Support: Hengstar distributes and supports LS-DYNA, LS-OPT, LS-Prepost, LS-TaSC, LSTC FEA Models; Hongsheng Lu, previously was directly employed by LSTC before opening his distributorship in China for LSTC software. Hongsheng visits LSTC often to keep update on the latest software features.

Hengstar also distributes and supports d3View; Genesis, Visual DOC, ELSDYNA; Visual-Crash Dyna, Visual-Process, Visual-Environment; EnkiBonnet; and DynaX & MadyX etc.

Consulting

As a consulting company, Hengstar focus on LS-DYNA applications such as crash and safety, durability, bird strike, stamping, forging, concrete structures, drop analysis, blast response, penetration etc with using LS-DYNA's advanced methods: FEA, ALE, SPH, EFG, DEM, ICFD, EM, CSEC..

Distribution/Consulting	US/Canada	Distribution/Consulting	
Canada	**Metal Forming Analysis Corp MFAC** galb@mfac.com www.mfac.com		
	LS-DYNA	LS-OPT	LS-PrePost	LS-TaSC
	LSTC Dummy Models	LSTC Barrier Models	eta/VPG	
	eta/DYNAFORM	INVENTIUM/PreSys		
United States	**CAE Associates Inc.** info@caeai.com www.caeai.com			
	ANSYS Products	CivilFem	Consulting ANSYS Consulting LS-DYNA	
United States	**DYNAMAX** sales@dynamax-inc.com www.dynamax-inc.com			
	LS-DYNA	LS-OPT	LS-PrePost	LS-TaSC
	LSTC Dummy Models		LSTC Barrier Models	

Distribution/Consulting	US/Canada	Distribution/Consulting	
United States	**ESI-Group N.A** www.esi-group.com		
	QuikCAST	SYSWELD	PAM-RTM	PAM-CEM
	VA One	CFD-ACE+	ProCAST Process	Visual-
	VisualDSS	Weld Planner	Visual-Environment	IC.IDO
United States	**Engineering Technology Associates – ETA** www.eta.com		etainfo@eta.com	
	INVENTIUM/PreSy	NISA	VPG	LS-DYNA
	LS-OPT	DYNAform		
United States	**Gompute** www.gompute.com		info@gompute.com	
	LS-DYNA Cloud Service		Additional software	
	Additional Services			
United States	**Comet Solutions** Comet Software		steve.brown@cometsolutions.com	

Distribution/Consulting	US/Canada	Distribution/Consulting

United States	**Livermore Software Technology Corp**		sales@lstc.com	
	LSTC www.lstc.com			
	LS-DYNA	LS-OPT	LS-PrePost	LS-TaSC
	LSTC Dummy Models	LSTC Barrier Models	TOYOTA THUMS	

United States	**Predictive Engineering** www.predictiveengineering.com		george.laird@predictiveengineering.com	
	FEMAP	NX Nastran	LS-DYNA	LS-OPT
	LS-PrePost	LS-TaSC	LSTC Dummy Models	
			LSTC Barrier Models	

Distribution/Consulting	Europe	Distribution/Consulting

France	**DynaS+**		v.lapoujade@dynasplus.com	
	www.dynasplus.com		Oasys Suite	
	LS-DYNA	LS-OPT	LS-PrePost	LS-TaSC
	DYNAFORM	VPG	MEDINA	
	LSTC Dummy Models		LSTC Barrier Models	

Germany	**CADFEM GmbH**		lsdyna@cadfem.de
	www.cadfem.de		
	ANSYS	LS-DYNA	optiSLang
	ESAComp	AnyBody	
	FTI FormingSuite		

Germany	**DYNAmore GmbH**		uli.franz@dynamore.de	
	www.dynamore.de			
	PRIMER	LS-DYNA	FTSS	VisualDoc
	LS-OPT	LS-PrePost	LS-TaSC	DYNAFORM
	Primer	FEMZIP	GENESIS	Oasys Suite
	TOYOTA THUMS		LSTC Dummy & Barrier Models	

The Netherlands	**Infinite Simulation Systems B.V**		j.mathijssen@infinite.nl	
	www.infinite.nl			
	ANSYS Products	CivilFem	CFX	Fluent
	LS-DYNA	LS-PrePost	LS-OPT	LS-TaSC

Italy	**EnginSoft SpA**		info@enginsoft.it	
	www.enginsoft.it			
	ANSYS	MAGMA	Flowmaster	FORGE
	CADfix	LS-DYNA	Dynaform	Sculptor
	ESAComp	AnyBody	FTI Software	
	AdvantEdge	Straus7	LMS Virtual.Lab	ModeFRONTIER
Russia	**STRELA**		info@dynarussia.com	
	LS-DYNA	LS-TaSC	LS-OPT	LS-PrePost
	LSTC Dummy Models		LSTC Barrier Models	
Sweden	**DYNAmore Nordic**		marcus.redhe@dynamore.se	
	www.dynamore.se		Oasys Suite	
	ANSA	µETA	LS-DYNA	LS-OPT
	LS-PrePost	LS-TaSC	FastFORM	DYNAform
	FormingSuite		LSTC Dummy Models	
			LSTC Barrier Models	
Sweden	**GOMPUTE**		info@gridcore.com	
	www.gridcore.se		www.gompute.com	
	LS-DYNA Cloud Service		Additional software	

Switzerland	**DYNAmoreSwiss GmbH**		info@dynamore.ch	
	www.dynamore.ch			
	LS-DYNA		LS-OPT	LS-PrePost
	LS-TaSC		LSTC Dummy Models	
			LSTC Barrier Models	

UK	**Ove Arup & Partners**		dyna.sales@arup.com	
	www.oasys-software.com/dyna		TOYOTA THUMS	
	LS-DYNA		LS-OPT	LS-PrePost
	LS-TaSC	PRIMER	D3PLOT	T/HIS
	REPORTER	SHELL	FEMZIP	HYCRASH
	DIGIMAT	Simpleware	LSTC Dummy Models	
			LSTC Barrier Models	

Australia	**LEAP**			
	www.leapaust.com.au			
	ANSYS Mechanical	ANSYS CFD	ANSYS EKM	Recurdyn
	ANSYS	ANSYS HPC	FlowMaster	Ensigh
	DesignXplorer			
	LS DYNA	DYNAform	Moldex 3D	FE-Safe
China	**ETA – China**		lma@eta.com.cn	
	www.eta.com/cn			
	Inventium	VPG	DYNAFORM	NISA
	LS-DYNA	LS-OPT	LSTC Dummy Models	LS-PrePost
			LSTC Barrier Models	LS-TaSC
China	**Oasys Ltd. China**		Stephen.zhao@arup.com	
	www.oasys-software.com/dyna			
	PRIMER D3PLOT	HYCRASH	T/HIS REPORTER	SHELL
	LS-DYNA	LS-OPT	LSTC Dummy Models	LS-PrePost
	DIGIMAT	FEMZIP	LSTC Barrier Models	LS-TaSC
China	**Shanghai Hengstar Technology**		info@hengstar.com	
	www.hengstar.com			
	LS-DYNA	LS-TaSC	LSTC Barrier Models	D3VIEW
	LS-PrePOST	LS-OPT	LSTC Dummy Models	
	Genesis	VisualDoc		EDDYNA
	Visual-Crahs DYNA	Visual-Proeces		DynaX & MadyX
	Enki Bonnet	Visual Environement		

India	**Oasys Ltd. India**		lavendra.singh@arup.com	
	www.oasys-software.com/dyna			
	PRIMER	D3PLOT	T/HIS	
			LS-OPT	LSTC Dummy Models
			LS-DYNA	LSTC Barrier Models
				LS-PrePost
				LS-TaSC

India	**CADFEM Eng. Svce**		info@cadfem.in	
	www.cadfem.in			
	ANSYS	VPS	ESAComp	optiSLang
	LS-DYNA	LS-OPT	LS-PrePost	

India	**Kaizenat Technologies Pvt. Ltd**		support@kaizenat.com	
	http://kaizenat.com /			
	LS-DYNA	LS-OPT	LSTC Dummy Models	LS-PrePost
	Complete LS-DYNA suite of products		LSTC Barrier Models	LS-TaSC

Japan	**CTC**	LS-dyna@ctc-g.co.jp		
	www.engineering-eye.com			
	LS-DYNA	LS-OPT	LS-PrePost	LS-TaSC
	LSTC Dummy Models	LSTC Barrier Models	CmWAVE	
Japan	**JSOL**			
	www.jsol.co.jp/english/cae		Oasys Suite	
	JSTAMP	HYCRASH	JMAG	
	LS-DYNA	LS-OPT	LS-PrePost	LS-TaSC
	LSTC Dummy Models	LSTC Barrier Models	TOYOTA THUMS	
	FUJITSU			
	http://jp.fujitsu.com/solutions/hpc/app/lsdyna			
	LS-DYNA	LS-OPT	LS-PrePost	LS-TaSC
	LSTC Dummy Models	LSTC Barrier Models	CLOUD Services	
Japan	**LANCEMORE**	info@lancemore.jp		
	www.lancemore.jp/index_en.html			
	Consulting			
	LS-DYNA	LS-OPT	LS-PrePost	LS-TaSC
	LSTC Dummy Models	LSTC Barrier Models		
Japan	**Terrabyte**	**English:**		
	www.terrabyte.co.jp	www.terrabyte.co.jp/english/index.htm		
	Consulting			
	LS-DYNA	LS-OPT	LS-PrePost	LS-TaSC
	LSTC Dummy Models	LSTC Barrier Models	AnyBody	

Korea	**THEME**	wschung@kornet.com		
	www.lsdyna.co.kr		Oasys Suite	
	LS-DYNA	LS-OPT	LS-PrePost	LS-TaSC
	LSTC Dummy Models	LSTC Barrier Models	eta/VPG	Planets
	eta/DYNAFORM	FormingSuite	Simblow	TrueGRID
	JSTAMP/NV	Scan IP	Scan FE	Scan CAD
	FEMZIP			

Korea	**KOSTECH**	young@kostech.co.kr		
	www.kostech.co.kr			
	LS-DYNA	LS-OPT	LS-PrePost	LS-TaSC
	LSTC Dummy Models	LSTC Barrier Models	eta/VPG	FCM
	eta/DYNAFORM	DIGIMAT	Simuform	Simpack
	AxStream	TrueGrid	FEMZIP	

Taiwan	**Flotrend**	gary@flotrend.tw		
	www.flotrend.com.tw			
	LS-DYNA	LS-OPT	LS-PrePost	LS-TaSC
	LSTC Dummy Models	LSTC Barrier Models	eta/VPG	FCM

Taiwan	**APIC**			
	www.apic.com.tw			
	LS-DYNA	LS-OPT	LS-PrePost	LS-TaSC
	LSTC Dummy Models	LSTC Barrier Models	eta/VPG	FCM

GOMPUTE
A GRIDCORE COMPANY

HPC on-demand for academic users

Run your LS-DYNA simulations and pay for what you use on a turn-key environment

- For LSTC academic customers.
- Run your simulations from 0.05 €/CCH without reservation
- Remote visualization using LS-PrePost
- Avoid installation and maintenance costs
- Other simulation applications also ready to use
- Global connectivity, remote graphics and collaborative environment
- Large number of cores available

For more information please visit: www.gompute.com

Price for computing-core/hour (CCH). Licenses and account set up are not included. Pricing valid only for universities, academic centers and research institutes. The following are trademarks or registered trademarks of Livermore Software Technology Corporation in the United States and/or other countries: LS-DYNA, LS-OPT, LS-PrePost, LS-TaSC. Gompute is owned and operated by Gridcore AB, 2012

POD (Penguin Computing on Demand) offers software including LSTC's LS-DYNA
www.penguincomputing.com/services/hpc-cloud

Penguin HPC clusters are optimized for engineering workloads and offer:

- Instant access to an HPC Cloud Cluster
- High performance InfiniBand bare-metal compute
- Free support from HPC experts
- No charges for network transfers
- Cost-effective, pay-per-use billing model
- Secure environment for private data
- Detailed billing reports for user groups and projects

Self Registration Portal – featuring rich--documentation, wiki, FAQ, pricing and more.
https://pod.penguincomputing.com/

POD Software Applications and Libraries (visit site for complete listing)
FEA, CFD and FDTD Modeling

- **LS-DYNA** / LS-PrePost LS-DYNA is an advanced general-purpose multiphysics simulation software package. Its core-competency lie in highly nonlinear transient dynamic finite element analysis (FEA) using explicit time integration. LS-PrePost is an advanced pre and post-processor that is delivered free with LS-DYNA.
- **OpenFoam:** OpenFOAM (Open source Field Operation And Manipulation) is a C++ toolbox for the development of customized numerical solvers, and pre-/post-processing utilities for the solution of continuum mechanics problems, including computational fluid dynamics (CFD).

- **ANSYS HFSS:** ANSYS HFSS software is the industry standard for simulating 3-D full-wave electromagnetic fields. Its gold-standard accuracy, advanced solver and compute technology have made it an essential tool for engineers designing high-frequency and high-speed electronic components.
- **ANSYS Fluent** ANSYS Fluent software contains the broad physical modeling capabilities needed to model flow, turbulence, heat transfer, and reactions for industrial applications.
- **Star-CD** and **Star-CCM+:** STAR-CCM+ is CD-adapco´s newest CFD software product. It uses the well established CFD solver technologies available in STAR-CD, and it employs a new client-server architecture and object oriented user interface to provide a highly integrated and powerful CFD analysis environment to users.
- **Convergent:** CONVERGE is a Computational Fluid Dynamics (CFD) code that completely eliminates the user time needed to generate a mesh through an innovative run-time mesh generation technique.
- **Lumerical:** Simulation tools that implement FDTD algorithms.

Cloud computing services
for
JSOL Corporation LS-DYNA users in Japan

JSOL Corporation is cooperating with chosen cloud computing services

JSOL Corporation, a Japanese LS-DYNA distributor for Japanese LS-DYNA customers.

LS-DYNA customers in industries / academia / consultancies are facing to the increase use of LS-DYNA more and more in recent years.

In calculations of optimization, robustness, statistical analysis, larger amount of LS-DYNA license in short term are required.

JSOL Corporation is cooperating with some cloud computing services for JSOL's LS-DYNA users and willing to provide large in short term license.

This service is offered to the customers by the additional price to existence on-premises license, which is relatively inexpensive than purchasing yearly license.

The following services are available

(only in Japanese).

HPC OnLine

NEC Solution Innovators, Ltd.
http://jpn.nec.com/manufacture/machinery/hpc_online/

Focus
Foundation for Computational Science
http://www.j-focus.or.jp

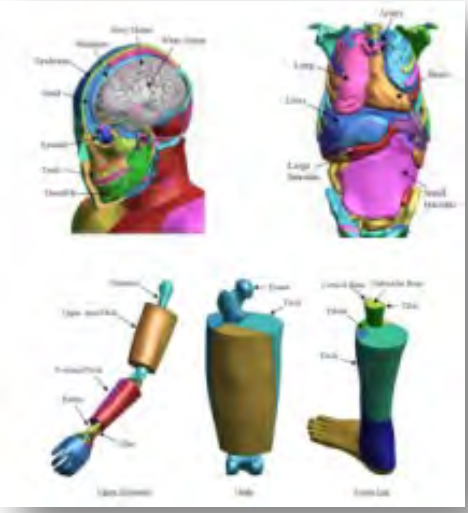
Platform Computation Cloud
CreDist.Inc.
http://www.credist.co.jp /

PLEXUS CAE
Information Services International-Dentsu, Ltd. (ISID) https://portal.plexusplm.com/plexus-cae/

SCSK Corporation
http://www.scsk.jp/product/keyword/keyword07.html

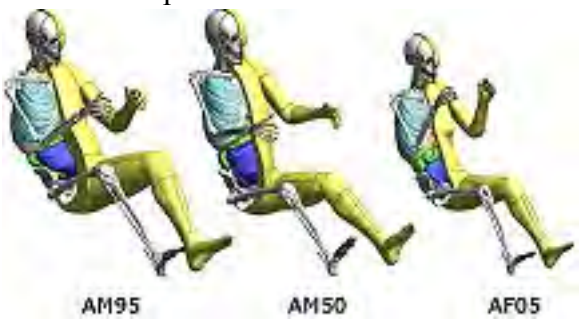
Contact; JSOL Corporation Engineering Technology Division cae-info@sci.jsol.co.jp

TOYOTA - Total Human Model for Safety – THUMS

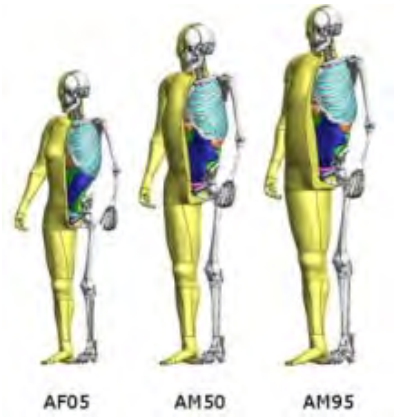


The Total Human Model for Safety, or THUMS®, is a joint development of Toyota Motor Corporation and Toyota Central R&D Labs. Unlike dummy models, which are simplified representation of humans, THUMS represents actual humans in detail, including the outer shape, but also bones, muscles, ligaments, tendons, and internal organs. Therefore, THUMS can be used in automotive crash simulations to identify safety problems and find their solutions.

Each of the different sized models is available as sitting model to represent vehicle occupants



and as standing model to represent pedestrians.



The internal organs were modeled based on high resolution CT-scans.

THUMS is limited to civilian use and may under no circumstances be used in military applications.

LSTC is the US distributor for THUMS. Commercial and academic licenses are available.

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LSTC – Dummy Models

LSTC Crash Test Dummies (ATD)

Meeting the need of their LS-DYNA users for an affordable crash test dummy (ATD), LSTC offers the LSTC developed dummies at no cost to LS-DYNA users.

LSTC continues development on the LSTC Dummy models with the help and support of their customers. Some of the models are joint developments with their partners.

e-mail to: atds@lstc.com

Models completed and available (in at least an alpha version)

- Hybrid III Rigid-FE Adults
- Hybrid III 50th percentile FAST
- Hybrid III 5th percentile detailed
- Hybrid III 50th percentile detailed
- Hybrid III 50th percentile standing
- EuroSID 2
- EuroSID 2re
- SID-IIs Revision D
- USSID
- Free Motion Headform
- Pedestrian Legform Impactors

Models In Development

- Hybrid III 95th percentile detailed
- Hybrid III 3-year-old
- Hybrid II
- WorldSID 50th percentile
- THOR NT FAST
- Ejection Mitigation Headform

Planned Models

- FAA Hybrid III
- FAST version of THOR NT
- FAST version of EuroSID 2
- FAST version of EuroSID 2re
- Pedestrian Headforms
- Q-Series Child Dummies
- FLEX-PLI

LSTC – Barrier Models

Meeting the need of their LS-DYNA users for affordable barrier models, LSTC offers the LSTC developed barrier models at no cost to LS-DYNA users.

LSTC offers several Offset Deformable Barrier (ODB) and Movable Deformable Barrier (MDB) models:

•ODB modeled with shell elements
•ODB modeled with solid elements
•ODB modeled with a combination of shell and solid elements

•MDB according to FMVSS 214 modeled with shell elements
•MDB according to FMVSS 214 modeled with solid elements
•MDB according to ECE R-95 modeled with shell elements
•AE-MDB modeled with shell elements

•IIHS MDB modeled with shell elements
•IIHS MDB modeled with solid elements
•RCAR bumper barrier

•RMDB modeled with shell and solid elements

e-mail to: atds@lstc.com.

Elemance - the sole distributor of the Global Human Body Models

Who We Are Elemance is the sole distributor of the Global Human Body Models Consortium family of virtual models of the human body. The human model currently available for use is the 50th percentile male occupant (M50-O). The models are intended for human injury prediction in a variety of scenarios including sports, military, and automotive applications. The models were meticulously created to best represent the anatomy necessary to predict Crash Induced Injuries - but their application extends well beyond this area. The model's development was funded by the Global Human Body Models Consortium (GHBMC).

Global Human Body Models Consortium
Midsized Male Occupant Model (M50-O)

GHBMC M50-O

- 50th percentile male occupant
- Height 175 cm, Weight 76.8 kg
- 2.2 million elements
- Operates in LS-Dyna
- 400+ anatomical components
- Evaluated for 40+ crash induced injuries
- 60+ validation cases conducted at regional and full body levels
- 30+ peer-reviewed articles on its development GHBMC M50-O

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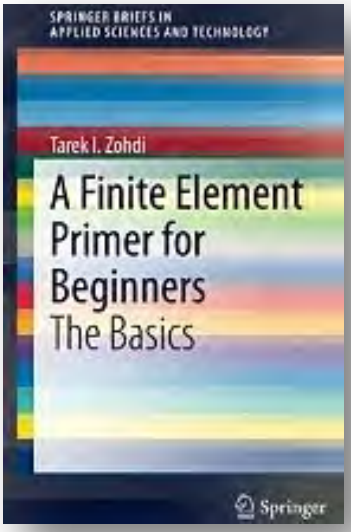

A Finite Element Primer for Beginners:

The Basics (SpringerBriefs in Applied Sciences and Technology) Paperback – October 14, 2014

by Tarek I. Zohdi (Author)

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- Assembly of the system and solution schemes,
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