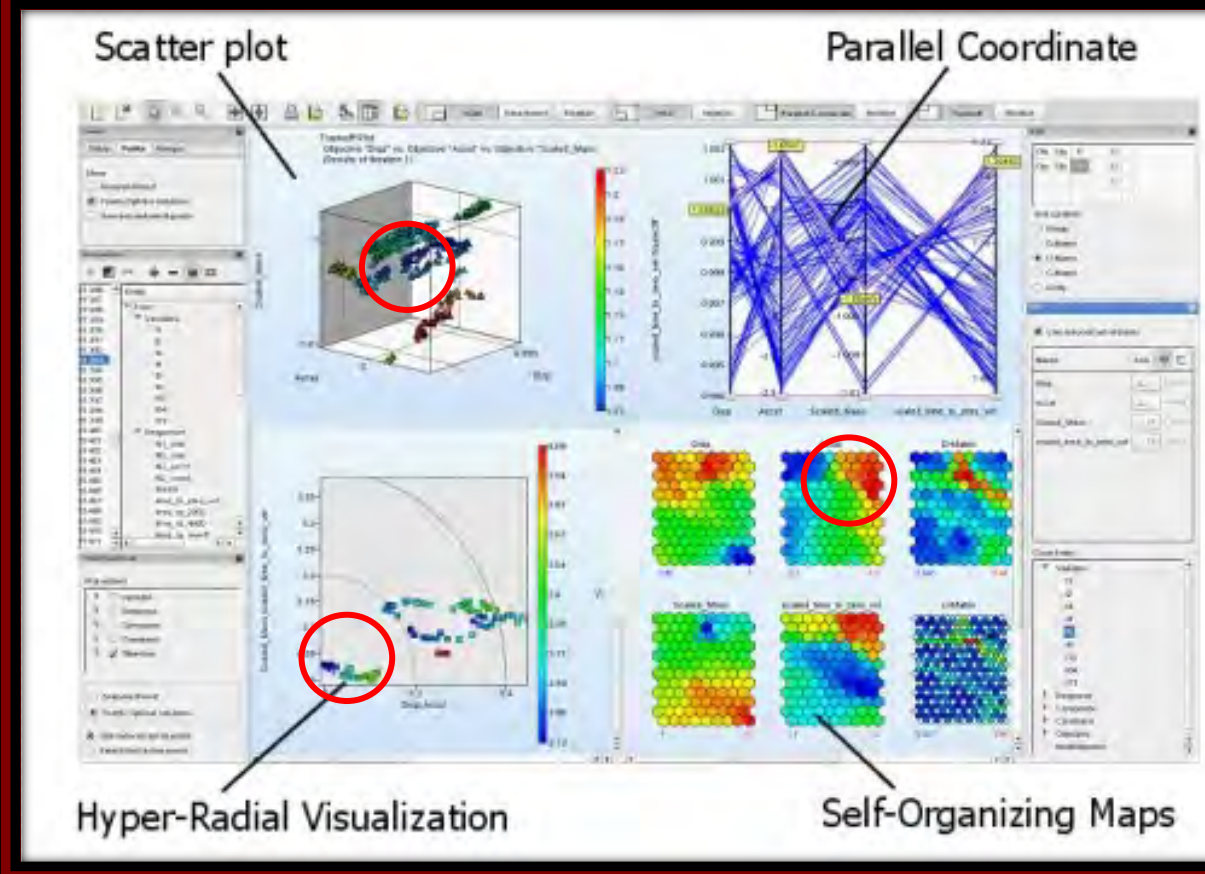
FINITE ELEMENT ANALYSIS feaINFORMATION.com

FEA Information Engineering Solutions

Volume 1, Issue 8, September 2012

LS-OPT: Integrated Pareto Front Exploration



Inside This Issue:

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. Published : February, April, June, August, October, December. The China Solutions is archived on the website FEA Publications. www.feapublications.com

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

FEA Information Engineering Journal: ISSN #2167-1273, first published February, 2012

Available on www.feaiej.com

Issues Now On Line	Volume 1 Issue 1 February 2012 Compilation	Volume 1 Issue 2 March 2012 Metal Forming	Volume 1 Issue 3 April 2012 FSI	Volume 1 Issue 4 May 2012 Aerospace	Volume 1 Issue 5 June 2012 Electromagnetics
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Platinum Participants

www.beta-cae.gr

www.cray.com

www.datapointlabs.com

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www.esi-group.com

www.gns-mbh.com/

http://gridcore.se

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www.jsol.co.jp/english/cae

www.lstc.com

www.oasys-software.com/dyna/en/

kaizenat.com

www.dfe-tech.com

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9th European LS-DYNA Users' Conference –

Location: Manchester Central Convention Centre, Manchester, UK

CALL FOR PAPERS AND REGISTRATION NOW OPEN

Arup are pleased to announce that the 9th European LS-DYNA Users' Conference will be held at Manchester Central Convention Complex, UK on 3r d and 4th June 2013.

Manchester is situated in the centre of the UK with one of the world's best connected international airports and efficient road and rail links. The event will give those in academia and industry a chance to present their work to colleagues and to catch up on the latest developments in the software. Attendees can also meet with exhibitors to find out more about hardware, software and services relating to LS-DYNA.

On the evening of Monday 3rd June the Gala Dinner will take place at the Museum of Science and Industry, just a short walk from the conference venue. The museum brings to life innovation and invention from science and industry through the ages even offering rides on 'Planet', a reproduction steam locomotive!

Welcome Reception & Social Event:
Sunday 2nd June 2013

Conference:
Mon. 3rd & Tues. 4th June 2013

Gala Dinner:
Monday 3rd June 2013

Registration & Call for Papers now open. For Complete Information:
http://arup.cvent.com/euroconference

LEAP has rejoined FEA Information:

LEAP = Leading Engineering Application Providers

"We have a long established reputation for successfully delivering Computer Aided Engineering CAE software and services to hundreds of Australian and New Zealand

"Optimization in Nonlinear Dynamics"

A session organized by Dr. Nielen Stander of LSTC

We welcome unsolicited topics, ideas, and articles. Publishing is at the sole discretion of FEA Information Inc.

Sincerely, Marsha Victory, Trent Eggleston, FEA Information

Initiated to track the aggregate performance trends of high performance computer systems and engineering software.

Instead of using a synthetic benchmark, actual engineering software applications are used with real data and are run on high performance computer systems.

Vendor/Submitter Org.: Bull/Bull
Submitted: 08/08/2012
Benchmark Problem: Car2car
Computer/Interconnect: bullx blade system (B510)/IB QDR

Processor	#Nodes x #Processors per Node x #Cores Per Processor = Total #CPU	Time (Sec)
Intel® Xeon® E5-2680 @2.70GHz Turbo Enabled	2 x 2 x 8 = **32**	25227
Intel® Xeon® E5-2680 @2.70GHz Turbo Enabled	4 x 2 x 8 = **64**	13981
Intel® Xeon® E5-2680 @2.70GHz Turbo Enabled	8 x 2 x 8 = **128**	7442
Intel® Xeon® E5-2680 @2.70GHz Turbo Enabled	16 x 2 x 8 = **256**	4294
Intel® Xeon® E5-2680 @2.70GHz Turbo Enabled	32 x 2 x 8 = **512**	2823
Intel® Xeon® E5-2680 @2.70GHz Turbo Enabled	64 x 2 x 8 = **1024**	2072

By: Dr. Nielen Stander, LSTC

10th World Congress on Structural and Multidisciplinary Optimization
May 19-24, 2013, Orlando, Florida, USA

Session Announcement:
"Optimization in Nonlinear Dynamics"
Organized by:
Dr. Nielen Stander
LSTC
held at 10th World Congress on Structural and Multidisciplinary Optimization

"I am organizing a session on "Optimization in Nonlinear Dynamics" at the next conference of the *International Society for Structural and Multidisciplinary Optimization* (WCSMO10). As a user of LS-DYNA, I would like to invite you to submit an abstract to this session. In order for me to provide early feedback, interested participants may submit their abstracts to nielen@lstc.com a week or two prior to the deadline." Nielen Stander

Contributions for this session may include:

- Crashworthiness Optimization
- Optimization in Fluid Dynamics
- Optimization in Reactive Flow
- Optimization in Electromagnetics
- Optimization in Fluid-Structure Interaction
- Optimization using LS-DYNA
- Parameter Identification of Nonlinear Materials
- Topology Optimization in Nonlinear Dynamics

The 500 words abstract submission deadline is January 15, 2013

Final abstracts must be submitted, directly through the conference website, by January 15, 2013.

General information about the conference can be found on the conference web site http://conferences.dce.ufl.edu/wcsmo-10 .

Nielen Stander
(nielen@lstc.com)

LS-DYNA Analysis Models
http://www.lancemore.jp/ls-dyna/index_en.html

Here we are showing a collection of sample models created through LS-DYNA by Lancemore FEA team. LS-DYNA is useful not only for the nonlinear structural analysis, but also for analyzing FSI (Fluid Structural Interaction) and supporting the implicit method function. It also covers a wide range of fields including particle method, vibration and acoustic analysis, and we are expecting that the range will keep on expanding in the future.

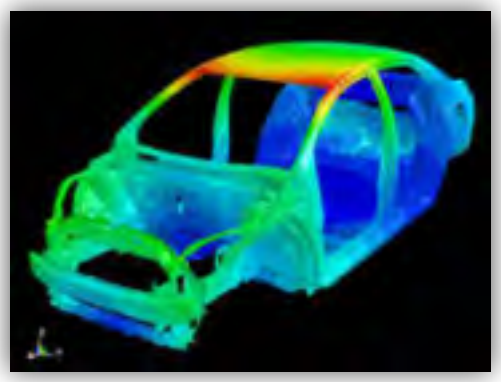
The sample models have been created and collected for the purposes of letting you know what
LS-DYNA can do a nd demonstrating our knowledge and abilities to create models. We are hoping that our models come in useful for you. If you wish to create a particular model, please contact us. We will offer the best cost-effective solutions. Thank you for your interest in our models!

Contact: info@lancemore.jp

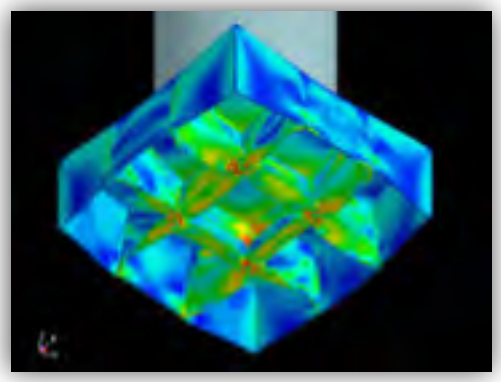
For complete m odel information please visit www.lancemore.com.jp

Among the models are:
Updated on 08-09-2012

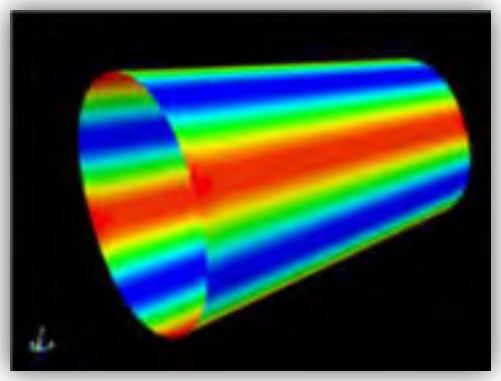
No.278
Bending Analysis of Plate



No.275
Eigenvalue Analysis of NCAC Yaris BIW Model



No.268
Drop Test FEA for Resin Box 9cells



No.270
Eigenvalue analysis of CFRP Laminated Circular Cylindrical Shells

About

Company name Lancemore Co.
President Kihei TSUTSUI
Date of Established Jan 2005
Head office
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Japan
E-mail info@lancemore.jp

http://www.dynasupport.com/

The LS-DYNA support site

At this site you will find answers to basic and advanced questions that might occur while using LS-DYNA. Furthermore it will provide information about new releases and ongoing developments. The content will be regularly updated with answers to frequent questions related to LS-DYNA. LS-DYNAsupport will not provide information on activities of your local LS-DYNA distributor as seminars, promotions, etc. We may ask to check the local sites for any kind of non-technical information.

Recent Changes - please visit the site for the pdf files.

LS-DYNA_Vol_II_R6.1.0
Sep 06, 2012

LS-DYNA_Vol_I_R6.1.0
Sep 06, 2012

Install a New Network License (Microsoft Windows)
Aug 28, 2012

History Variables for Certain Material Models
Aug 27, 2012

Upgrade a Network License (Microsoft Windows)
Aug 24, 2012

http://www.lsoptsupport.com/

The LS-OPT Support Site

As of August 31st there is the Beta release of LS-OPT® Version 4.3 available for download

LS-OPT 4.3

Release notes for LS-OPT 4.3

The following new features are available in LS-OPT 4.3:

- The MAC criterion replaces the Generalized Mass criterion for mode tracking (merged to Version 4.2). An option to turn off mode tracking was added.
- Mode tracking is supported for all versions of LS-DYNA, including LS-DYNA MPP (merged to Version 4.2).
- Sampling of the Pareto Optimal Front as a sampling option. A Space Filling algorithm, to maximize the distance between any two points in the design space, is used.
- Option for selecting the number of verification runs for the trade-off curve of multi-objective optimization. Space Filling sampling is done to obtain a well-distributed trade-off set.
- Head injury criterion (HIC) using three nodes for the different coordinate directions.
- Support Vector Regression introduced as a metamodeling type.
- User-defined postprocessor option.

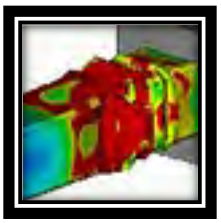
Examples section demonstrates LS-OPT capabilities by means of a series of examples.

Among the examples are

Metal Forming

Metal forming requires the analysis of adaptive results at specific coordinates. The results can then be compared even though the node locations and numbers differ between FE models. This example demonstrates: Robustness of metal forming, Mapping results from adaptive meshes, and Using a stochastic field described with a sinusoidal perturbation.

Coupling ANSA



This example presents the coupling of LS-OPT with a pre-processor (ANSA). A front rail will be tested in crash simulation. The target is to find the best arrangement of its embosses in order to minimize the acceleration that appears in the test. Following features are illustrated: model definition (morphing boxes/parameters), Task Manager sequence definition and the LS-OPT setup.

Full Vehicle MDO

This example illustrates a realistic application of Multidisciplinary Design Optimization (MDO) and concerns the coupling of the crash performance of a full vehicle with torsional stiffness and mode frequency. LS-DYNA is used for explicit crash and implicit NVH and eigenvalue simulations.

http://investors.cray.com/phoenix.zhtml?c=98390&p=irol-newsArticle&ID=1730535&highlight=

Cray XE6m Supercomputer Vital to Hydrocarbon Research in the Gulf of Mexico in the Wake of the Deepwater Horizon Incident and Hurricane Isaac

Aug 31, 2012 -- Global supercomputer leader Cray Inc. (NASDAQ: CRAY) today announced that the Consortium for Advanced Research on Transport of Hydrocarbon in the Environment (CARTHE), in collaboration with the University of Miami Center for Computational Science (CCS), will acquire a Cray XE6m supercomputer as part of the organization's goal to develop and improve computational tools to accurately predict the fate of hydrocarbons released into the environment during normal and hurricane weather conditions.

"This supercomputer is more important than ever to our project in light of Hurricane Isaac cutting directly through our on-going experiment in the Gulf of Mexico. Data collected during the hurricane may help shed light on how pollutants behave should an oil spill occur before or during a m ajor weather event like Hurricane Isaac," said Tamay Özgökmen, CARTHE director.

An animated movie of Hurricane Isaac going through the experiment can be seen at http://laplace.ceoe.udel.edu/GLAD/DRIFTERS/GLAD_movie.gif.

Özgökmen added, "We have some challenging goals ahead of us as we produce comprehensive modeling hierarchy that provides a four dimensional description of oil/dispersant fate and transport in the Gulf of Mexico and coastal environments across all relevant time and space scales, and in multiple weather conditions. High performance computing is a critical element of our research, and we needed a system that has the performance, usability and demonstrated capabilities that will allow us to start our work now. The Cray XE6m is a great fit for us."

CARTHE is funded by the Gulf of Mexico Research Initiative (GoMRI), which is a 10-year, $500 m illion independent research program that was established to study the effects of the Deepwater Horizon incident. GoMRI investigates the impacts of oil, dispersed oil, and dispersant on the ecosystems of the Gulf of Mexico and affected coastal States in a broad context of improving fundamental understanding of the dynamics of such events and their environmental stresses and public health implications.

The Cray XE6m supercomputer, which will be located at the University of Miami's Rosentiel School of Marine & Atmospheric Science (RSMAS), will be an important computational resource for a CARTHE program that is studying the surface ocean currents that transport pollutants in real time.

"The Cray XE6m is quite unique and much like a very tightly knit computational ecosystem," said Nick Tsinoremas, CCS director. "It is likely the very best solution for problems of this type today."

CCS staff oversaw real-time data management from the information collected from 300 drifting buoys this summer that occurred in five-minute intervals, and they will continue to provide logistical support to scientists as the data are analyzed throughout the project.

"The Cray supercomputer not only provides impressive computing power, but it represents an entirely new form of computing for many principal investigators whose problems fit into the same sort of paradigm as the CARTHE project," said Joel Zysman, CCS director of high-performance computing. "With the system scheduled to be up and running in approximately nine weeks, we have a wonderful new tool for these researchers."

"The scientists participating in the CARTHE program are performing some vitally important research, and we are honored that a C ray supercomputer will provide the high performance computing resources that are necessary for their studies," said Per Nyberg, Cray's director of business development. "Many of the world's leading weather, climate and oceanography centers run their simulations on Cray supercomputers, and we are pleased that CARTHE has joined our growing list of customers in this segment."

The Cray XE6m system includes the same petascale technologies found in high-end Cray supercomputers, such as Cray's Gemini interconnect, the Cray Linux Environment and powerful AMD Opteron processors. The system is designed to maintain an attractive cost of ownership and extend Cray's presence in market segments that have needs for technical enterprise supercomputing systems, such as the university, manufacturing, weather and life sciences communities. Fully upgradeable from previous generations of Cray supercomputers, the Cray XE6m system is also designed to give customers the ability to upgrade to future Cray systems and technologies.

About CARTHE: CARTHE comprises 26 pr incipal investigators from 12 universities and research institutions distributed across four Gulf of Mexico states and four other states. It fuses into one group of investigators with scientific and technical knowledge and publications related to oil fate/transport processes, oceanic and atmospheric turbulence, air-sea interactions, tropical cyclones and winter storms, and coastal and nearshore modeling and observations. Visit http://www.carthe.org/ for more information.

The University of Miami Center for Computational Science (CCS) was created to catalyze transdisciplinary research in science and engineering with software, hardware and expertise to address complex problems of the 21st century and beyond. CCS provides a framework for promoting collaborative and multidisciplinary activities with partners within the university and around the world. With eight focus areas, it strives for excellence in research, teaching, and service covering the fundamental, as well as applied aspects, of computational science.

About Cray Inc.: As a global leader in supercomputing, Cray provides highly advanced supercomputers and world-class services and support to government, industry and academia. Cray technology is designed to enable scientists and engineers to achieve remarkable breakthroughs by accelerating performance, improving efficiency and extending the capabilities of their most demanding applications. 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 surpass today's limitations and meeting the market's continued demand for realized performance. Go to http://www.cray.com/ for more information.

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 Cray's ability to deliver the system required by CARTHE when required and that meets CARTHE's needs. 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 system required by CARTHE is not delivered in a timely fashion or does not perform as expected and such other risks as identified in the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2012, 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 t hese 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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jhollenbeck@rsmas.miami.edu
Cray Investors: Paul Hiemstra 206/701-2044 ir@cray.com

http://www.esi-group.com/corporate/finance/news/financial-press-release/acquisiton-of-opencfd-ltd-the-leader-in-open-source-software-in-computional-fluid-dynamics

Acquisition of OpenCFD Ltd., The leader in Open Source software in Computional Fluid Dynamics

- Embracing the 'Open Source' business model
- Broad global user base and a brand with substantial visibility in a fast-growing market
- Strong and diversified customer value creation and unique opportunity for business expansion
- Accretive operation

ESI Group, pioneer and world-leader in Virtual Prototyping and Virtual Engineering solutions, today announces the acquisition of OpenCFD Ltd., the leader in the Open Source Computational Fluid Dynamics (CFD) software segment, from SGI, the trusted leader in Technical Computing. ESI Group consequently becomes the owner of the OpenFOAM® trademark, widely recognized in automotive, energy, aerospace and other industry sectors, and assumes responsibility and initiative for the further development, quality and support of the software. ESI and SGI will be expanding their partnership and go to market collaboration to improve accessibility of CFD, at affordable cost, reliable quality, and competitive performance.

Embracing the Open Source Business Model

- OpenFOAM® is a free, open source CFD software family and analysis toolbox. It is developed and packaged by the OpenFOAM® team within OpenCFD Ltd., a UK company, and it is distributed by the OpenFOAM Foundation.

- OpenCFD Ltd contributes software, integrates modules and generates documentation to the OpenFOAM® software; it owns the OpenFOAM® trademark and provides services that support the effective deployment of CFD technology.

- OpenFOAM Foundation is a non-profit organization; it w as established for the purpose of ensuring the sustainable distribution of OpenFOAM®, exclusively under a 'no cost Open Source license' agreement. ESI will be the exclusive supporting arm of the OpenFOAM Foundation to guarantee the continuity of its Open Source business model and vision.

Alain de Rouvray, ESI Group's Chairman and CEO, adds:

"This acquisition is in line with our selective external growth strategy, and it reaffirms our ability to adapt to, welcome and anticipate changes in the Virtual Engineering market. Indeed we believe that the 'Open source' software model and the associated use of cloud computing will accelerate the low cost and gradual adoption of numerical simulation and, when applicable, will facilitate the further migration to the high value creation of ESI's "End-to-End Virtual Prototyping" solutions.

OpenCFD Ltd. and its team of experts will allow us to reaffirm our leadership in CFD as a means to an end, namely Enabling Virtual Engineering for all. And it will also support the diversification of our business sectors and the adaptation of our business models. Important to our 'go-to-market' strategy, OpenFOAM®'s broad popularity will provide us with preferred access to its vast and global user base, giving further opportunities for our extended software and services offer, creating substantial value for our clients, staff and shareholders, while opening new, collaborative, innovative and promising perspectives."

About ESI

ESI is a pioneer and world-leading provider in Virtual Prototyping that takes into account the physics of materials. ESI boasts a unique know-how in Virtual Product Engineering, based on an integrated suite of coherent, industry-oriented applications. Addressing manufacturing industries, Virtual Product Engineering aims to replace physical prototypes by realistically simulating a product's behavior during testing, to fine-tune fabrication and assembly processes in accordance with desired product performance, and to evaluate the impact of product use under normal or accidental conditions. ESI's solutions fit into a single collaborative and open environment for End-to-End Virtual Prototyping. These solutions are delivered using the latest technologies, including immersive Virtual Reality, to bring products to life in 3D; helping customers make the right decisions throughout product development. The company employs about 900 high-level specialists worldwide covering more than 30 countries. ESI Group is listed in compartment C of NYSE Euronext Paris.

For further information, visit
www.esi-group.com .

ETA provides engineering & development services from Concept to Product

The company offers a variety of services including product design, complete product development solutions, computer aided engineering (CAE) analysis, finite element analysis (FEA) analysis and IT services. A tier-one supplier to the global automotive industry, it o ffers expertise in NVH, metal forming, crashworthiness, occupant safety and product design. Advanced CAE experience has led to the development of its Accelerated Concept to Product (ACP) Process™, a product design/ development method based on de sign optimization.

ETA is also the developer of simulation and analysis software tools. The Inventium Suite™ is ETA's enterprise product development solution. T he suite offers a high performance modeling and post-processing system, with a robust path for the integration of new tools and third party applications. E TA's software products address many needs including finite element (FE) modeling, crash/safety analysis, drop testing, fluid structure interaction, metalforming and stamping related analysis. These engineering tools offer a v ariety of applications including in the automotive, aerospace, military, consumer electronics, appliance, civil engineering and renewable resource industries.

ENGINEERING

Providing services for Concept to Product, ETA is one of the largest and fastest growing engineering service suppliers in the world. We offer a variety of services including product design, CAE services, as well as complete product development solutions.

We have developed a revolutionary product development method, the Accelerated Concept to Product (ACP) Process, to significantly reduce product development costs and reduce product mass while improving product performance.

The ACP Process is a p roprietary, performance-driven, holistic product design development method, which incorporates the use of multiple CAE tools to generate an optimal design solution.

ETA has unique expertise in:

- ¦Full Vehicle, Component and Sub-System Development Programs
- ¦Components--Interior, Body, Chassis
- ¦Product Development
- ¦Mass Reduction
- ¦Performance Improvement
- ¦Advanced Crash & Occupant Safety Analysis
- ¦Pre-production Performance--Crash, NVH and Durability
- ¦Concept, Development and Verification (load and fatigue life)
- ¦Metal Forming Applications & Manufacturing Process Simulation
- ¦Manufacturing Process Improvements

SOFTWARE

Inventium Suite™ - From Concept to Product.

The Inventium Suite™ is an enterprise-level CAE software solution. Inventium offers a streamlined product architecture provides users access to all of the suite's software tools. By design it offers a high performance modeling and post-processing system, while providing a robust path for the integration of new tools and third party applications.

PreSys - Works the Way You Do

Inventium's Core FE Modeling Toolset, PreSys 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 - Analyze Mechanical SystemsAccurately

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.

NISA - Solving Engineering Challenges

NISA™ is a robust & comprehensive Finite Element Analysis (FEA) software toolset for engineering analysis. For over three decades scientists, engineers & researchers have come to depend on N ISA™ to solve their most complex engineering problems. It can be used on its own or with PreSys™.

October Training Offered

2nd - Introduction to DYNAFORM
9th - Introductionto PreSUS
16th - Introduction to LS-DYNA

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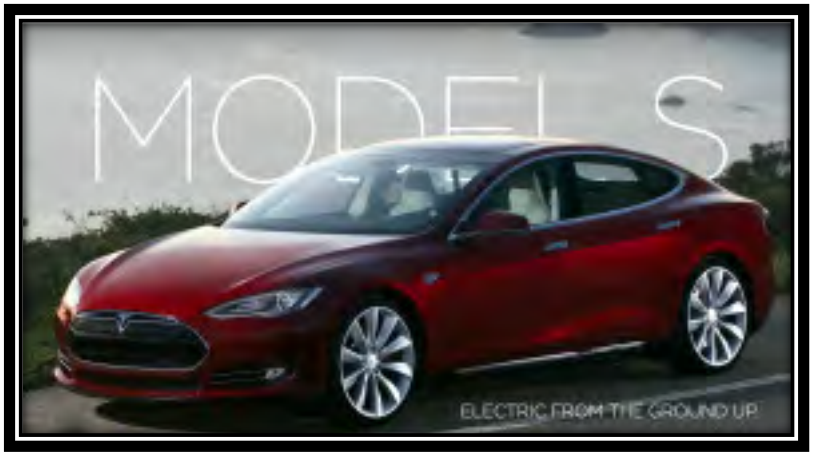
Email: etainfo@eta.com

Tesla Motors Launches Revolutionary Supercharger Enabling Convenient Long Distance Driving

http://www.teslamotors.com/about/press/releases/tesla-motors-launches-revolutionary-supercharger-enabling-convenient-long-dista



Drive the Model S electric car anywhere in the country on pure sunlight for free

Monday, September 24, 2012

Tesla Motors (NASDAQ: TSLA) today unveiled its highly anticipated Supercharger network. Constructed in secret, Tesla revealed the locations of the first six Supercharger stations, which will allow the Model S to travel long distances with ultra fast charging throughout California, parts of Nevada and Arizona.

The technology at the heart of the Supercharger was developed internally and leverages the economies of scale of existing charging technology already used by the Model S, enabling Tesla to create the Supercharger device at minimal cost. The electricity used by the Supercharger comes from a s olar carport system provided by SolarCity, which results in almost zero marginal energy cost after installation. Combining these two factors, Tesla is able to provide Model S owners1 free long distance travel indefinitely.

Each solar power system is designed to generate more energy from the sun over the course of a year than is consumed by Tesla vehicles using the Supercharger. This results in a slight net positive transfer of sunlight generated power back to the electricity grid. In addition to lowering the cost of electricity, this addresses a commonly held misunderstanding that charging an electric car simply pushes carbon emissions to the power plant. The Supercharger system will always generate more power from sunlight than Model S customers use for driving. By adding even a small solar system at their home, electric car owners can extend this same principle to local city driving too.

The six California locations unveiled today are just the beginning. By next year, we plan to install Superchargers in high traffic corridors across the continental United States, enabling fast, purely electric travel from Vancouver to San Diego, Miami to Montreal and Los Angeles to New York. Tesla will also begin installing Superchargers in Europe and Asia in the second half of 2013.

The Supercharger is substantially more powerful than any charging technology to date, providing almost 100 kilowatts of power to the Model S, with the potential to go as high as 120 kilowatts in the future. This can replenish three hours of driving at 60 mph in about half an hour, which is the convenience inflection point for travelers at a highway rest stop. Most people who begin a road trip at 9am would normally stop by noon to have lunch, refresh and pick up a coffee or soda for the road, all of which takes about 30 minutes.

"Tesla's Supercharger network is a game changer for electric vehicles, providing long distance travel that has a level of convenience equivalent to gasoline cars for all practical purposes. However, by making electric long distance travel at no cost, an impossibility for gasoline cars, Tesla is demonstrating just how fundamentally better electric transport can be," said Elon Musk, Tesla Motors co-founder and CEO. "We are giving Model S the ability to drive almost anywhere for free on pure sunlight."

1. Supercharging hardware is standard on Model S vehicles equipped with an 85 kW h battery and optional on Model S vehicles equipped with a 60 kWh battery.

About Model S: With the most energy-dense battery pack in the industry and best-in-class aerodynamics, Model S has the longest range of any production electric car in the world. Model S comes with three battery options to fit the unique needs of different drivers. The 85 kWh Model S has received a U.S. fuel economy rating of 89MPGe and an EPA rated range of 265 miles.

Model S is the first premium sedan designed from the ground up to take full advantage of electric vehicle architecture. A revolutionary powertrain sits under the floorboard of Model S, creating an ultra-low center of gravity. Paired with an aluminum body engineered for superior handling, Tesla has created a vehicle that raises the bar for performance and efficiency while meeting the highest standards for safety.

Without an internal combustion engine or transmission tunnel, the interior of Model S has more cargo space than any other sedan in its class and includes a second trunk under the hood. Model S seats five adults and two children in optional rear-facing child seats. Model S Performance models accelerate from 0 to 60 mph in under 4.4 seconds.

The interior features a 17" in-dash touchscreen with internet capabilities, allowing for streaming radio, web browsing and navigation.

Customers can reserve a Model S at one of Tesla's retail stores or online.

About Tesla

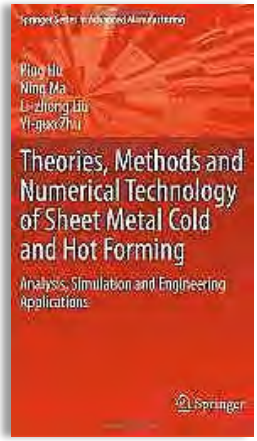
Tesla's goal is to accelerate the world's transition to electric mobility. Palo Alto, California-based Tesla designs and manufactures EVs and EV power train components for partners such as Toyota and Daimler. Tesla has delivered more than 2,350 Roadsters to customers worldwide. Model S, the first premium sedan to be built from the ground up as an electric vehicle, began deliveries in June 2012.

Forward-Looking Statements

Certain statements in this press release including statements regarding future Supercharger locations and capabilities are "forward-looking statements" that are subject to risks and uncertainties. These forward-looking statements are based on management's current expectations. Various important factors could cause actual results to differ materially, including the risks identified in our SEC filings. Tesla disclaims any obligation to update this information.

Press Contacts
Christina Ra, Tesla Motors
650-681-5227

Shanna Hendriks, Tesla Motors
650-681-5179

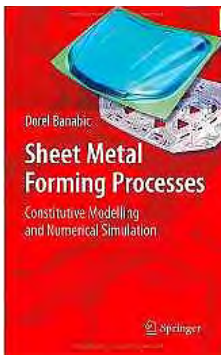


Theories, Methods and Numerical Technology of Sheet Metal Cold and Hot Forming: Analysis, Simulation and Engineering Applications (Springer Series in Advanced Manufacturing)

Ping Hu (Author), Ning Ma (Author), Li-zhong Liu (Author), Yi-guo Zhu (Author)

Publication Date: July 21, 2012 | ISBN-10: 1447140982 | ISBN-13: 978-1447140986 | Edition:

Over the last 15 years, the application of innovative steel concepts in the automotive industry has increased steadily. Numerical simulation technology of hot forming of high-strength steel allows engineers to modify the formability of hot forming steel metals and to optimize die design schemes. Theories, Methods and Numerical Technology of Sheet Metal Cold and Hot Forming focuses on ho t and cold forming theories, numerical methods, relative simulation and experiment techniques for high-strength steel forming and die design in the automobile industry. Theories, Methods and Numerical Technology of Sheet Metal Cold and Hot Forming introduces the general theories of cold forming, then expands upon advanced hot forming theories and simulation methods, including: the forming process, constitutive equations, hot boundary constraint treatment, and hot forming equipment and experiments. Various calculation methods of cold and hot forming, based on the authors' experience in commercial CAE software for sheet metal forming, are provided, as well as a discussion of key issues, such as hot formability with quenching process, die design and cooling channel design in die, and formability experiments. Theories, Methods and Numerical Technology of Sheet Metal Cold and Hot Forming will enable readers to develop an advanced knowledge of hot forming, as well as to apply hot forming theories, calculation methods and key techniques to direct their die design. It is therefore a useful reference for students and researchers, as well as automotive engineers.



Micro Metal Forming (Lecture Notes in Production Engineering)

Publication Date: December 14, 2012

ISBN-10: 3642309151 | ISBN-13: 978-3642309151 | Edition: 2012

This edited volume provides a comprehensive overview about the production of metal micro parts, i.e. parts with dimensions below 1mm. The book describes metal forming technologies as well as related technologies like simultaneous engineering.

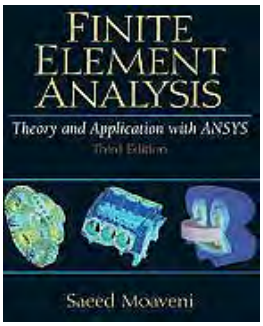
Applied Metal Forming

Publication Date: March 31, 2010 | ISBN-10: 0521518237 | ISBN-13: 978-0521518239 | Edition: 1

Applied Metal Forming: Using FEM Analysis describes metal forming theory and how experimental techniques can be used to study any metal forming operation with great accuracy. For each primary class of processes, such as forging, rolling, extrusion, wiredrawing, and sheet-metal forming, it explains how FEA (Finite Elements Analysis) can be applied with great precision to characterize the forming condition and in this way optimize the processes.

CAE design and sheet metal forming Applications: Based on DYNAFORM (2)

by LI FEI ZHOU DENG



Finite Element Analysis Theory and Application with ANSYS (3rd Edition)

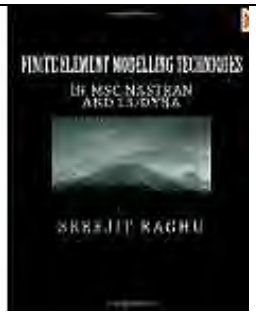
Saeed Moaveni

Practical Stress Analysis with Finite Element

Bryan J Mac Donald

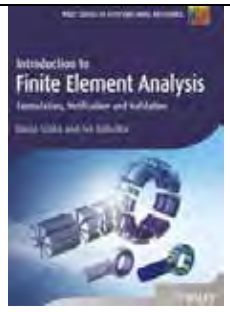
A First Course in the Finite Element Method

Daryl L. Logan



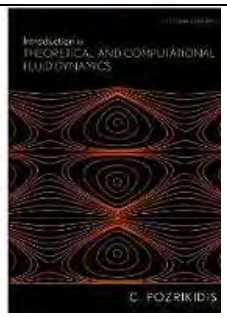
Finite Element Modelling Techniques in MSC.NASTRAN and LS/DYNA

Sreejit Raghu



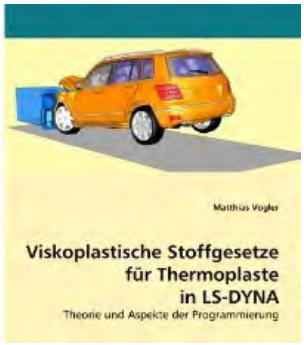
Finite Element Analysis/formulation & verification

B. A. Szabo



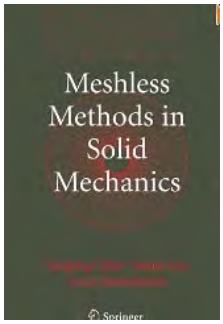
Introduction to Theoretical and Computational Fluid Dynamics

C. Pozrikidis



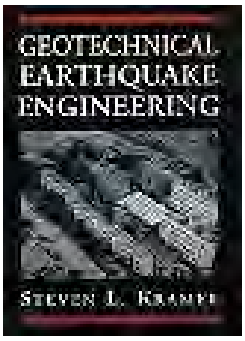
Viskoplastische Stoffgesetze für Thermoplaste in LS-DYNA: Theorie und Aspekte der Programmierung

Matthias Vogler



Meshless Methods in Solid Mechanics

Youping Chen



Geotechnical Earthquake Engineering

Steven Lawrence Kramer

Biomechanical Systems Technology: Computational Methods

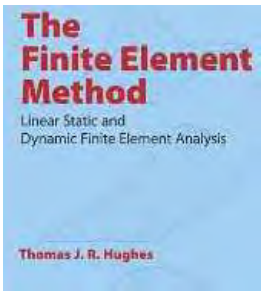
Cornelius T. Leondes

Numerical response of steel reinforced concrete slab subjected to blast and pressure loadings in LS-DYNA.

Vivek Reddy

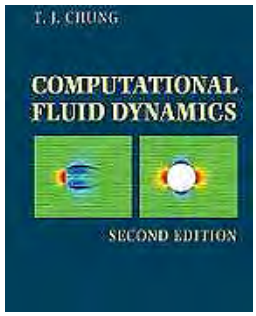
Formulas for Mechanical and Structural Shock and Impact

Gregory Szuladziniski



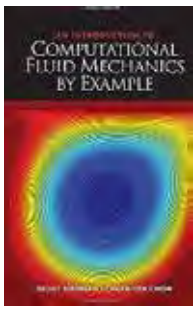
The Finite Element Method

Thomas J. R. Hughes



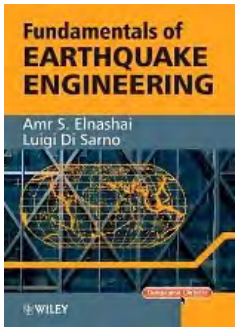
Computational Fluid Dynamics

T. J. Chung



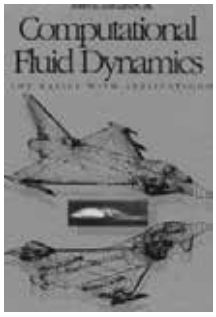
An Introduction to Computational Fluid Mechanics by Example

Sedat Biringen



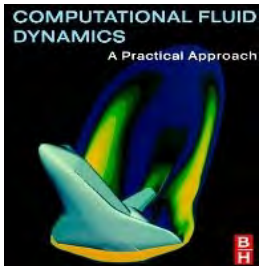
Fundamentals of Earthquake Engineering

Amr S. Elnashai



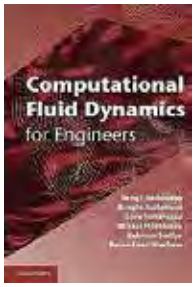
Computational Fluid Dynamics

John David Anderson



Computational Fluid Dynamics: A Practical Approach [Paperback]

Guan Heng Yeoh



CFD for Engineers

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

BETA CAE Systems S.A.– ANSA

Is 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

CRAY

www.cray.com

http://www.cray.com/Products/Products.aspx

The Cray XK6

The Cray XK6 supercomputer combines Cray's proven Gemini interconnect, AMD's leading multi-core scalar processors and NVIDIA's powerful many-core GPU processors to create a t rue, productive hybrid supercomputer

Cray XE6™ and Cray XE6m™ Supercomputers

The Cray XE6 scalable supercomputer is engineered to meet the demanding needs of capability-class HPC applications. The Cray XE6m is optimized to support scalable workloads in the midrange market.

Cray XMT™ System YarcData uRiKA™ Graph Appliance

The YarcData uRiKA graph appliance is a purpose built solution for Big Data relationship analytics. uRiKA enables enterprises to discover unknown and hidden relationships in Big Data, perform real-time analytics on Big Data graph problems, and realize rapid time to value on Big Data solutions.

The uRiKA graph appliance complements an existing data warehouse or Hadoop cluster.

Cray Sonexion 1300™ Storage System

The Cray Sonexion 1300 system is an integrated, high performance storage system that features next-generation modular technology to maximize the performance and capacity scaling capabilities of the Lustre file system.

Cray also offers custom and third-party storage and data management solutions

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 ph ysical properties.

ETA – Engineering Technology Associates www.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: Visual-Environment is 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.

GNS - Gesellschaft für Numerische Simulation mbH www.gns-mbh.com

Animator4

A general finite element post-processor and holds a leading position in its field. Animator4 is used worldwide by almost all automotive companies, a great number of aerospace companies, and within the chemical industry.

Generator2.

A specialized pre-processor for crashworthiness applications and has become very successful in the field of passenger safety and pedestrian protection. It is mainly used as a positioning tool for finite element component models by a great number of automobile companies throughout the world.

Indeed

An easy-to-use, highly accurate virtual manufacturing software that specializes in the simulation of sheet metal forming processes. Indeed is part of the GNS software suite and works concurrently with all other GNS software products.

OpenForm

A pre- and post-processor independently of a particular finite element forming simulation package. The software is extremely easy to handle and can be used as was designed to enable those who are not finite element experts to carry out multi-stage forming simulations with even complex multi purpose finite element codes.

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. T he 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

www.oasys-software.com/dyna

Oasys LS-DYNA® Environment

The Oasys Suite of software, exclusively written for LS-DYNA®, is at the leading edge of the market and is used worldwide by many of the largest LS-DYNA® customers.

Oasys PRIMER is a model preparation tool that is fully compatible with the latest version of LS-DYNA®, eliminating the risk of data loss or corruption when a file is manipulated, no matter what operations are performed on it:

Key benefits:

- Maintains data integrity
- Finds and fixes model errors (currently over 5000 checks)
- Specialist tools for dummy positioning, seatbelt fitting, mechanisms, interior head impact etc.
- Connection manager for spotwelds, bolts, adhesive etc.
- Intelligent editing, deletion and merging of data
- Customisable with macros and JavaScript.

Oasys D3PLOT is a powerful 3D visualization package for post-processing LS-DYNA® analyses

Key benefits:

- Fast, high quality graphics
- Easy, in-depth access to all LS-DYNA® results.
- User defined data components
- Customisable with JavaScript.

Oasys T/HIS is an X-Y graph plotting package for LS-DYNA®

Key benefits:

1. Automatically reads all LS-DYNA® results.
2. Wide range of functions and injury criteria.
3. Easy handling of data from multiple models
4. Scriptable for automatic post-processing

Oasys REPORTER is an automatic report generation tool, for use with LS-DYNA®. which allows fast automatic report creation for analyses.

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, Hengstar Technology will continue to organize high level training courses and seminars in 2012.

The lectures/training are taught by senior engineers and experts mainly from LSTC, Carhs, OEMs, and other consulting groups.

On Site Training

Hengstar also provides customer customized training programs on-site at the company facility. Training is tailored for company needs using LS-DYNA or the additional software products by LSTC.

Distribution & Support

Hengstar Distributes and supports LS-DYNA, LS-OPT, LS-PrePost, LS-TaSC. Hongsheng Lu, previously was directly employed by LSTC before opening his distributorship in China for LSTC software. He travels to LSTC often to keep current on the latest software features and support to continue to grow Hengstar as a CAE consulting group.

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	

United States	**ESI-Group N.A** www.esi-group.com			
	QuikCAST	SYSWELD	PAM-RTM	PAM-CEM
	VA One	CFD-ACE+	ProCAST	Visual-Process
	VisualDSS	Weld Planner	Visual-Environment	IC.IDO
United States	**Engineering Technology Associates – ETA** www.eta.com		sales@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	**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	

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

France	**ALYOTECH**		nima.edjtemai@alyotech.fr	
	www.alyotech.fr			
	ANSYS	LS-DYNA	MOLDEX3D	FEMZIP
	Primer	PreSys	DYNAFORM	SKYGEN
	MERCUDA	MOCEM		

Germany	**CADFEM GmbH**		lsdyna@cadfem.de	
	www.cadfem.de			
	ANSYS	LS-DYNA	optiSLang	DIGIMAT
	ESAComp	AnyBody	VPS	
	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	
	TOYOTA THUMS		LSTC Dummy & Barrier Models	
Germany	**GNS**		mbox@gns-mbh.com	
	www.gns-mbh.com			
	Animator	Generator	Indeed	OpenForm
Netherland	**Infinte**		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			
	ANSA	µETA	LS-DYNA	LS-OPT
	LS-PrePost	LS-TaSC	FastFORM	DYNAform
	FormingSuite		LSTC Dummy Models	
			LSTC Barrier Models	
Sweden	**GRIDCORE**		info@gridcore.com	
	www.gridcore.se			
	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			
	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 DesignXplorer	ANSYS HPC	FlowMaster	Ensigh
	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	
	LS-DYNA Courses	LS-OPT	LSTC Dummy Models	LS-PrePost

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

India	**EASI Engineering**		rvenkate@easi.com	
	www.easi.com			
	ANSA			
	LS-DYNA	LS-OPT	LSTC Dummy Models	LS-PrePost
			LSTC Barrier Models	LS-TaSC

India	**CADFEM Eng. Svce**		info@cadfem.in	
	www.cadfem.in			
	ANSYS VPS	optiSLang	ESAComp	DIGIMAT
	LS-DYNA	LS-OPT	LSTC Dummy Models	LS-PrePost
	FTI FormingSuite	AnyBody	LSTC Barrier Models	LS-TaSC

Distribution & Consulting	Asia Pacific	Distribution & Consulting

Japan	**ITOCHU**	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			
	JSTAMP	HYCRASH	JMAG	
	LS-DYNA	LS-OPT	LS-PrePost	LS-TaSC
	LSTC Dummy Models	LSTC Barrier Models	TOYOTA THUMS	

Japan	**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	

Korea	**THEME**	wschung@kornet.com		
	www.lsdyna.co.kr			
	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

Germany	Gridcore www.gridcore.se
Sweden	Gridcore www.gridcore.se
United States	Gompute www.gompute.com

The Complete Courses Offered Can Be Found At: www.cadfem.de

Please check the site for accuracy and changes.
Among the many course offered:

Introduction to explicit structural mechanics with ANSYS-LS-DYNA and LSTC's LS-DYNA

11/06/12 12/19/12

Material Modeling with LS-DYNA
10/16/12

Contact modeling with LS-DYNA
11/06/12

Modeling joints with LS-DYNA
10/12/12

Introduction to simulation with Diffpack
11/06/12

Working efficiently with Diffpack in ANSYS Workbench
11/07/12

Additional Courses are offered – please check the website for upcoming dates for: FTI Forming Suite - DIGIMAT DIFFPACK and others.

Individual Training: Take advantage of the expertise of our specialists and get to know how simulation processes in your company can be arranged in an optimal way.

The Complete Courses Offered Can Be Found At: www.dynamore.de/en

Intro LS-DYNA
09/20/12 10/15/12 10/30/12 12/10/12

Contact Definitions
10/18/12

Plasticity
10/24/12

Users Interfaces
11/19/12

Crash Analysis
12/04/12

ALE
10/11/12

Meshless Methods
10/11/12

The Complete Courses Offered Can Be Found At: www.lstc.com

Please check the site for accuracy and changes. Among the many course offering are the following:

Introduction to LS-OPT MI
November 6-9, 2012

Introduction to LS-PrePost (no charge) CA
November 12, 2012

Introduction to LS-DYNA CA
November 13-16, 2012

Introduction to LS-PrePost (no charge) MI
December 10, 2012

Introduction to LS-DYNA MI
December 11-14, 2012

Advanced Options in LS-DYNA MI
December 17-18, 2012

2013 Introduction to LS-DYNA

CA Jan 29 - Feb 01
CA April 30 - May 3
CA July 30 August 2
CA November 19-22

MI March 19-22
MI June 18-21
MI August 20-23
MI December 10-13

The Complete Courses Offered Can Be Found At: www.dynamore.se

Please check the site for accuracy and changes.
Among the many course offering are the following:

LS-PrePost 3, introduction
November 26

LS-DYNA, introductory course
November 27

LS-DYNA, implicit analysis
October 2

ANSA & Metapost, introductory course
October 9

Contacts in LS-DYNA
October 12

LS-DYNA, simulation of sheet metal forming processes
October 16

LS-DYNA, advanced training class in impact analysis
November 20

The complete Training Courses offered can be found at www.dynasplus.com

Please check the site for accuracy and changes.

LS-DYNA Unified Introduction Implicit & Explicit Solver
16-19/01, 18-21/06 & 12-15/11

LS-OPT & LS-TaSC Introduction
24-25/10

Switch to LS-DYNA
10-11/10

Switch from Ls-PrePost 2.X to 3.X
28/11

LS-DYNA ALE / FSI
-material modeling
14-15/12
22-23/10

LS-DYNA SPH
21-22/05 & 8-9/10

LS-PrePost 3.0 – Advanced meshing capabilities
5/04 & 27/09 & 29/11

LS-DYNA – Plasticity, Damage & Failure – By Paul DU BOIS
26-27/11
(date may be changed in Q1)

LS-DYNA – Polymeric materials – By Paul DU BOIS
12-13/12

Users LS-DYNA Days

Alyotech will be hosting two Users Days this year. These events will focus on t he recent evolutions of LS-DYNA and related products from LSTC and will feature talks both about novel functions and real-world applications.

Two sessions will be held: the first one will take place in Toulouse on S eptember 20th while the second one will be held in Antony on November 8th.

Each session will start with lectures from Alyotech and presentations of studies from LS-DYNA users in the morning. The afternoon will then be devoted to discussions between users on selected topics of interest.

Don’t hesitate to contact us at support.ls-dyna@alyotech.fr

Engineering Technology Associates

The Complete Courses Offered Can Be Found At: www.eta.com

Please check the site for accuracy and changes.

Among the many course offering are the following:

Introduction to DYNAFORM

October 2nd

November 6th

December 4th

Introduction to PreSys

October 9th

November 13th

December 11th

Introduction to LS-DYNA

October 16th

November 20th

December 18th

The Complete Courses Offered Can Be Found At: www.caeai.com

Please check the site for accuracy and changes. Among the many course ffering are the following:

ANSYS Training, CFD and FEA Consultants Serving CT, NJ, NY, MA, NH , VT

Oct 15, 2012
1 day ANSYS DesignModeler / Middlebury, CT $ 600.00

Oct 16, 2012
1 day ANSYS Workbench Meshing for CFD / Middlebury, CT $ 600.00

Oct 17, 2012
2 days Introduction to CFX / Middlebury, CT

The Complete Courses Offered Can Be Found at http://www.hengstar.com

2012	2	3	4	5	6	7	8	9	10	11	12
An Introduction to LS-DYNA(High Level)											
Concrete & Geomaterial Modeling with LS-DYNA											
Pedestrian Safety and Bonnet Design with LS-DYNA											
Crashworthiness Theory and Technology											
LS-DYNA MPP, Airbag Simulation with LS-DYNA											
Introduction of LS-OPT which is Based on LS-DYNA											
Passive Safety and Restraint Systems Design											
Crashworthiness Simulation with LS-DYNA											
Passive Safety Simulation with LS-DYNA											
Crashworthy Car Body Development - Design, Simulation and Optimization											

For course location visit www.alyotech.fr

LS-DYNA Introduction
- Oct 01-03
- Nov 12-14
- Dec 03-05

LS-DYNA Implicit
- Nov 19-21

LS-PrePost – Meshing
- Nov 26

LS-PrePost – New Interface
- Nov 27

LS-OPT Introduction
- Dec 10-11

LS-TaSC – Topology Optimization
- Dec 12

October 09, 2012
www.dynamore.de/en/training/conferences/upcoming/ls-dyna-forum-2012/ls-dyna-update-forum-2011

German LS-DYNA Forum 2012 LS-DYNA Forum, 9 - 10 October 2012, Ulm, Germany

On the 9th and 10th October 2012, our 11th LS-DYNA Forum will be taking place at the Maritim Hotel in Ulm, Germany. We cordially invite you not only to attend the event but submit a paper. In your presentation, you can talk about your experiences with LS-DYNA or LS-OPT and you can discuss and exchange these experiences with other users.

User presentations will form the core of the event. General lectures given by renowned speakers are also planned as well as talks on the latest LS-DYNA und LS-OPT .

Comprehensive information all about

LS-DYNA software can be obtained from the accompanying exhibition.

The Forum will be accompanied by seminars which will be held during the week of the conference on t he subjects of CPM Airbag OoP, ALE and fluid-structure inter-action, meshless methods and on c oncrete and geomaterial modeling.

Your presentation: You are cordially invited to contribute towards the program plan by submitting a paper. Contributions from the various areas of application of LS-DYNA/LS-OPT are planned

To Submit your papers: Please send us the title, authors and a short summary (approx. 300 words).

Dates:
Submission of two-page summary for proceedings: 7th Sept. 2012

Location: Maritim Hotel Ulm
Basteistraße 40, 89073 Ulm

Registration and contact
DYNAmore GmbH
Tel. +49 (0) 7 11 - 45 96 00 - 0
Fax +49 (0) 7 11 - 45 96 00 - 29
E-Mail: forum@dynamore.de
www.dynamore.de/forum12

International CAE Conference 2012

22-23 October, Pacengo - Lazise (Verona) – Italy

Special Guest and Speaker
Professor Parviz Moin

Numerical analysis technologies are more and more present in the industrial world. They are absolutely essential to the product and process innovation at each level and in every industrial sector.

The International CAE Conference is hosted annually by EnginSoft, it presents the state-of-the-art of CAE in diverse industries. Significant user testimonials will prove how such technologies help increase product efficiency and ROI. This annual appointment is a major, an efficient platform for designers, analysts, IT managers, engineers, professors, researchers, associations and students involved or interested in virtual simulation tools.

The accompanying exhibition traditionally offers a networking platform, where CAE technology solution providers offer their knowledge, advice and expertise to the participants. A special section of the exhibition area will be dedicated to members of associations and scientific bodies, the technical press as well as to hardware vendors who provide the necessary know-how to implement machines and components to perform today's more and more complex analyses.

For more information on the Program and to register online, please visit: www.CAEconference.com

October 24-26, 2012 Location: Kassel Germany

Environmental protection and economic aspects make electric mobility one of the great challenges of the coming years. Step-by-step it will replace traditional forms of mobility in everyday life. Therefore, a number of projects have been defined in so-called 'model regions' in order to better understand and optimize this process.

For a better understanding of electric mobility and its optimization, simulation specialist ANSYS has extended its portfolio with a set of simulation applications that can serve as models in the development and implementation of innovative drive concepts. Structural and fluid mechanics and electromagnetic simulation models of the individual components are modeled in a consistent environment both individually and interacting, considering the drive as a complete multi-physical system – Engineering the System!

The ANSYS Conference & the 30th CADFEM Users' Meeting focus on the many simulation options in electric mobility and several other current application fields where structural mechanics, fluid mechanics and electro magnetics issues are important.

CADFEM GmbH and ANSYS Germany GmbH cordially invite you to join the conference

We look forward to your participation

The CADFEM & ANSYS Germany Team

 **FACEBOOK**

BETA CAE SYSTEMS SA
http://www.facebook.com/pages/BETA-CAE-Systems-SA/193472524006194

Cray Inc.
http://www.facebook.com/crayinc

ESI Group
http://www.esi-group.com/corporate/facebook/

 **TWITTER**

BETA CAE SYSTEMS SA
http://twitter.com/betacae

Cray Inc.
http://www.twitter.com/cray_inc

ESI Group
http://twitter.com/ESIgroup

ETA
http://twitter.com/ETA_Inc

 **LINKEDIN**

BETA CAE SYSTEMS SA

http://www.linkedin.com/company/beta-cae-systems-s.a.?trk=fc_badg

Cray Inc.

http://www.linkedin.com/company/4936

ETA

http://www.linkedin.com/groupRegistration?gid=1960361

Oasys

http://www.linkedin.com/groups/Oasys-LSDYNA-Environment-Software-4429580?gid=4429580&trk=hb_side_g

 **YOUTUBE**

BETA CAE SYSTEMS SA

http://www.youtube.com/user/betacae

Cray Inc.

http://www.youtube.com/user/crayvideo

ESI Group

http://www.youtube.com/ESIgroup

ETA

http://www.youtube.com/user/etainfo1

 **NEWS FEEDS**

http://www.eta.com/index.php/eta-news?format=feed&type=rss

http://www.enginsoft.it/

Founded in 1984, E nginSoft is a service provider, in Italy, for CAE and Digital Prototyping technologies. With its network of expert engineers, partner offices and subsidiaries in many countries, EnginSoft also represents one of the major players, in its segment at the global level.

We share the goals of our clients and partners. Together, we tackle the most challenging simulation problems, finding the optimal solution by looking at both technical and business aspects among multiple designs. This attitude, combined with our multidisciplinary know-how and fast implementation of tailored solutions, enable our clients to reduce their time to market, from concept design to the end product.

Among the industries:

- Automotive
- Aerospace
- Oil and Gas
- Appliances
- Marine
- Civil Eng.
- Mechanics
- Rail-Transport
- Environment
- Energy
- Consumer Goods
- Electronics
- Sport
- Biomechanics

Among the Disciplines

- Fluidodinamica 3D
- Fluidodinamica 1D
- Meccanica
- Ottimizzazione
- Acustica
- Fonderia
- Forgiatura
- Integrazione CAD/CAE
- Meshing
- Multibody
- Compositi
- Impatto

Solutions

MODEFRONTIER™	ANSYS
MAGMASOFT®	Forge
Flowmaster	EUCOORD
FTI Software	LS-DYNA
DigimatStraus7	µ-LAB
CADfix	Sculptor
ESAComp	AnyBody
Scilab	C harles