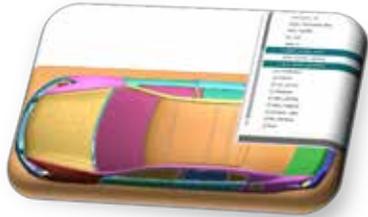


Oasys



Altair



BETA CAE Systems



DSTL



MSC.Software



ANSYS



ETA



Predictive Engineering



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FEANTM Announcement by Marsha Victory

Expanding, revolutionizing, aspiring to bring a variety of FEA news, software solutions, and articles.

Not sure how you all feel about it, but I'm happy we now have so many virtual conferences. I'm going to the LS-DYNA virtual conference in June! So excited! Since I retired a few years ago, I have not been to one and haven't seen many of you!

SO, now I can see you in June at the virtual conference.

Hi, Cathie Walton! Hi Akbar - Hi Uli and Marcus and Lavendra and Vincent and Paul DuBois and Suri and all of you. HEY, Dilip and Harsha. AND you will see my brother Art Shapiro who has also registered. A Virtual Get Together with Coffee!

June 10-11, 2020

For the first time ever, the annual [LS-DYNA User Conference](#) will be a free to attend, virtual event — coming to you live from your computer.



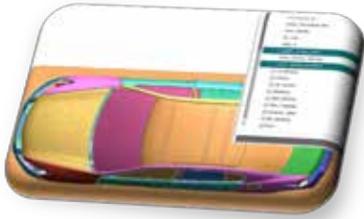
My choice for a FEA Not To Miss Speaker

Al Hancq - Al is vice president of development and in charge of the Mechanical Business Unit at Ansys. He has been at Ansys since 1994, starting as an intern on the APDL solver team. Throughout his career at Ansys he has worked on all facets of development.

Highlights including writing the Ansys fatigue module, developing the solver interface for Mechanical, and leading the Mechanical application development team.

FEANTM - May - Oasys Webinars

Editor Note: Oasys now offers Webinars from the comfort of your own desk.



Oasys Post Processing Customization

Oasys POST: Customisation

Calum Ridyard

1st April 2020

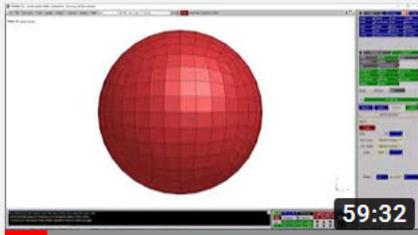
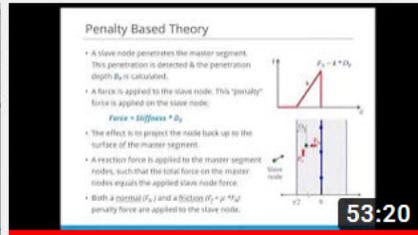


[This YouTube webinar](#) will cover some of the same content as the webinar delivered in August 2019. It will also include additional information on new features coming in v17.0 of Oasys D3PLOT and T/HIS, and the new user interface for the Oasys Software.

[Upcoming Training Webinars - register now](#) - Webinars are delivered by our software experts and provide an opportunity to listen and ask questions from the comfort of your own desk.

- 12 May, 2020 - Oasys Integrated Solutions
- 14 May, 2020 - New features to accelerate your workflow with the Oasys LS-DYNA Environment
- 18 May, 2020 - Oasys Suite – Latest expert tools for LS-DYNA models
- 02 Jun, 2020 - Oasys POST: T/HIS curves
- 01 Jul, 2020 - Oasys PRIMER and D3PLOT: composite tools

Additionally on YouTube

		
LS-OPT Part 2 213 views • 3 weeks ago	An Introduction to ICFD in LS DYNA 244 views • 3 months ago	An Introduction to Contacts 967 views • 3 months ago

Editor Note: [The below article in full is located and copyright to the Altair Blog.](#)
Dr. Uwe Schramm is the CTO for Altair's Solvers, Optimization and Smart Multi-physics Solutions and Strategy.



Topology Optimization and the Lessons of History

By Uwe Schramm on May 4, 2020

At Altair, we are focused on solving our customer's toughest challenges of today, all while working on tomorrow's innovations.

At Altair, we are focused on solving our customer's toughest challenges of today, all while working on tomorrow's innovations. However, occasionally there is real value in revisiting the past. It gives us an opportunity to remind ourselves and the wider design community of important lessons that shouldn't be forgotten or overlooked. Those lessons, in fact, are critical to helping shape the future technologies we are working on today.

Topology optimization is a good example of one of those important lessons. For many, it's the relatively recent arrival of commercially viable additive manufacturing that has brought its benefits into focus. This is hardly surprising, as there is a natural symbiosis between the two technologies. Topology optimization has been likened to a free-form 'bionic' process. Similarly, additive manufacturing promises almost unlimited possibilities in terms of shape and form. Structures that are forged and fine-tuned using topology optimization can therefore be

executed without having to fit the considerations of 'traditional' manufacturing methodologies.

As the world leader in topology optimization, we naturally welcome the many designers who are discovering our solutions via additive manufacturing. Amidst the fresh surge in interest, it's also important to remember that topology optimization has applications that extend much wider, and roots that reach far deeper.

The origins of topology optimization, date back to the late 1980s. That's when the idea of leveraging computing power to speed the development of structures that are optimized for characteristics such as mass and stiffness first emerged in the world of academia. Building on this work, Altair (then a small engineering consultancy) began commercial development. In 1994, that culminated in the release of Altair OptiStruct™, so innovative that it was named technology of the year by IndustryWeek.

FEANTM - May - Altair Topology Optimization

Editor Note: [The below article in full is located and copyright to the Altair Blog.](#)
Dr. Uwe Schramm is the CTO for Altair's Solvers, Optimization and Smart Multi-physics Solutions and Strategy.

Back then, we found our early adopters in the automotive industry. These were followed by progressive design teams in sectors such as aerospace and medical. OptiStruct spread from large, blue-chip organizations to smaller enterprises, who also saw the competitive advantages. Well before the emergence of 3D printing, OptiStruct proved its ability to embrace multiple manufacturing methods: forging, plastic injection molding, welded sheet metal structures, casting, and milling.

But we didn't stop there. OptiStruct continued to evolve in terms of capability and usability. Today, OptiStruct can consider a wide range of parameters, including external loads, design space, materials and cost, and functionality that extends to areas such as noise and vibrations, durability, non-linear structures, heat transfer, and dynamics.

Putting highly complex simulation within reach of more and more users, OptiStruct can justifiably claim to have changed the way the industry approaches the process of design. It was – and is – a truly disruptive technology.

In 1994, General Motors became our first-ever OptiStruct customer. Today, more than 3,000 companies worldwide are using it, but history reminds us that it is far from the full story. Regardless of industry or field of work like additive manufacturing, design engineers face common pressures: accelerating time-to-market, enhancing product performance, driving innovation. Going forward, the ability of topology optimization to deliver on all three will ensure it is embraced by an ever-wider community of talented designers, working across a growing range of industries, applications and manufacturing techniques



OPTISTRUCT IS A PROVEN, MODERN STRUCTURAL SOLVER WITH COMPREHENSIVE, ACCURATE AND SCALABLE SOLUTIONS FOR LINEAR AND NONLINEAR ANALYSES ACROSS STATICS AND DYNAMICS, VIBRATIONS, ACOUSTICS, FATIGUE AND MULTIPHYSICS DISCIPLINES. IT IS THE INDUSTRY-LEADING AND MOST WIDELY USED SOLUTION FOR STRUCTURAL DESIGN AND OPTIMIZATION. .

TO LEARN MORE ABOUT HOW OPTISTRUCT CAN WORK FOR YOU, [CLICK HERE](#)



FEANTM - May -Lancemore - LS-DYNA Simulations

Editor Note: Lancemore located in Japan has many LS-DYNA Video Simulations.
Lancemore does analysis and consulting.

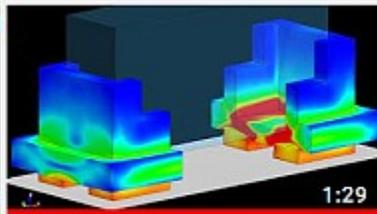
LANCEMORE Co., is one of the most advanced finite element analysis specialists in Japan, including analysis and consulting with LS-DYNA.

Latest Video Simulations Below:

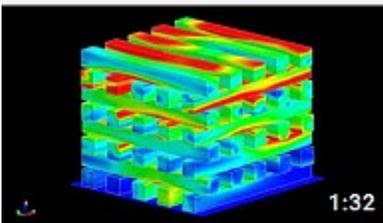
[YouTube Channel](#)



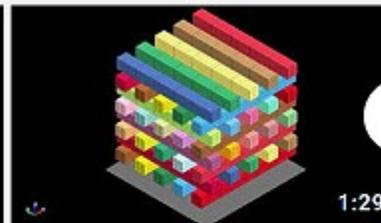
No.486 Rubber tube
compression test analysis



No.001 Drop impact
simulation for electronic ...



No.485 Stress Propagation
solid blocks using edge to ...



No.296 Falling Blocks using
edge to edge contact / 202...

LANCEMORE Co. serves individuals and organizations from various industries including:

- Aerospace, - Automobile, - Aviation, - Architecture, - Construction, - Electronics,
- Machinery, - Military, - Medical, - Security

[LancemoreJP YouTube Channel](#) and [Website](#)

FEANTM - May - BETA CAE Systems

Editor Note: BETA CAE has a YouTube Channel with videos & webinars

April 24th -

[This video demonstrates a short introduction to the BETA GUI Development Library and its capabilities.](#)



Apr 22, 2020

[Addressing the challenge of late design stage optimization: a passenger car Side Impact case](#)



As presented by Mr. Michael Tryfonidis from BETA CAE Systems at the 8th BEFORE REALITY Conference.

Apr 14, 2020

[CFD geometry preparation of a Formula-type car](#)

This webinar shows how to properly prepare the geometry of a formula type car to perform a CFD analysis, using ANSA.



[BETA CAE Systems YouTube Video Channel](#)

FEANTM - May - MSC.Software Virtual Test Drive Conference

Editor Note - Join the Virtual Test Drive Conference beginning May 19th



April 24, 2020 - by Product Marketing

Virtual Test Drive Conference beginning May 19

Don't miss our free online Virtual Test Drive Conference beginning May 19! This is a unique opportunity to learn about Virtual Test Drive solutions and how they can accelerate the development of ADAS and autonomous vehicles.

A packed agenda delivered online will include keynotes from blue-chip automotive, high-tech companies and innovative start-ups from around the globe.

Delegates will gain insight into the latest technological advances in virtual test driving and autonomous mobility, as well as hearing how industry leaders are addressing these challenges with Test Strategies, Tooling and Open Standards.

This is a great opportunity to share knowledge with your peers and network remotely with like-minded individuals.

For over 20 years VIRES has been pioneering simulation solutions that ensure compliance with safety standards for the automotive, railroad and aerospace industries. It played a leading role in the development of the OpenDRIVE, OpenCRG and OpenSCENARIO standards and now provides one of the world's

most advanced, modular and open platforms to train, test and validate ADAS and self-driving vehicles. VTD has set the industry benchmark for the creation, animation and perception of virtual test environments.

What can you expect?

- Keynotes from blue-chip automotive, high-tech companies and innovative start-ups
- Customer use cases
- The latest technological advances in virtual test driving and autonomous mobility
- Learn how industry leaders are addressing challenges with Test Strategies, Tooling and Open Standards
- Share knowledge with your peers and network with like-minded individuals

Who should tune in?

- Project Leaders involved in the development of ADAS and autonomous vehicles
- Users of Virtual Test Drive Solutions

How do you attend? [Sign up for free](#) and join in live during the conference and access the conference recording at any time

FEANTM - May - Predictive Engineering - George Laird

Editor Note - 100% George Laird - professional, creative, LS-DYNA expert.

LS-DYNA Analysis for Structural Mechanics – Free Download

A series of informal articles about one engineer's observation about the world of simulation engineering beyond the folk tales of "oh its really easy".

By: George Laird, PhD, PE -
Principal Mechanical Engineer, Predictive Engineering



Be All That U Can Be - My reality is that I will never master 'DYNA and that it will always master me or one might say "I'm always getting schooled by 'DYNA". Since many of us are experiencing some quality time out-of-the-office and, all of its distractions, maybe your time has finally arrived to touch up your 'DYNA skills?

Some of you might remember that Predictive teaches a five-day LS-DYNA class. It is somewhat unique since it is a blend of theory and practice with video workshops and extensive Class Reference Notes that I have accumulated from various and sundry sources.

If you are interested in downloading this course, one can download the class notes [using this link](#):

If you would like the whole package with the workshop videos and Class Reference Notes, just contact me via the PredictiveEngineering.com web page under Contact (here's the [link](#)🙄)

If you can wade thru this stuff then one might hear the tone of Shakespeare viz-a-viz the Feast of Crispian: as: "We few, we happy few, we band of 'DYNA brothers....."

April 21 - Blog - George Laird - [XFEM - Galactic Extended FEM - Coming to a Screen Near You](#)

Extended finite element method (XFEM) was developed by the late, great Dr. Ted Belytschko et al. at the end of the 90's (see Wikipedia for more details). Since he worked closely with the developers of LS-DYNA on many other topics, it is natural to see his work implemented within 'DYNA. I first met him in the early 90's when I took his and Prof. Hughes week-long Nonlinear FEA Methods in Palo Alto, CA. As for myself, I sat in the back with a post-doctoral student from Budiansky's group out of Harvard so he could explain to me what was going on since I was pretty much dazed and confused during the whole week. A little side note, all three, Belytschko, Hughes and Budiansky were Timoshenko Medal recipients. We now fast forward to 2020 and the XFEM is still something of academic interest but finding traction in the world of engineering. It is a lot like eye-candy to see a crack growing magically thru your structure, but the mechanics are real. Predictive Engineering recently completed an engineering services contract with a large US Navy shipbuilder where we used XFEM to make structural integrity predictions. The challenge was to quantitatively calculate the energy required to propagate a crack from a hull engine vent up through the panel and across a stiffener. The goal was to demonstrate that the crack could be arrested prior to reaching the main deck. The work was backed up via fracture mechanics calculations and static work calculating the localized mode I stress intensity factor (KI). Using XFEM we were able to optimize the crack arrestor bulb from somewhat massive dimensions to something that could be reasonably manufactured and thereby shaving a few tons of weight off the FFG(X)'s design.

Apr. 24, 2020 - [The case of J-OCTA "Adsorption energy of molecules on solid surface" was posted.](#)

Purpose and Method: The adsorption energy, which is the change in energy when a molecule is adsorbed on a solid surface, is one of the most basic parameters for understanding the behavior of a molecule on a surface, and affects the adhesion phenomenon, wettability, and dispersibility of particles.

In this case study, the adsorption energies of molecules on Au (111) surface and α -alumina surface were calculated by SIESTA using density functional theory.

In SIESTA, since the Basis Set Superposition Error (BSSE) is included in the calculation of the interaction energy, the adsorption energy is calculated with the formula below:

$$\Delta E_{ads}^{CP} = \Delta E_{surface-mol}^{CP} + \Delta E_{surface,deform} + \Delta E_{mol,deform}$$

- $\Delta E_{surface-mol}^{CP}$:The interaction energy between the surface and the molecule corrected by the Counterpoise method
- $\Delta E_{surface,deform}$:The energy difference between the adsorbed and isolated states of the surface
- $\Delta E_{mol,deform}$:The energy difference between the adsorbed and isolated states of the molecule

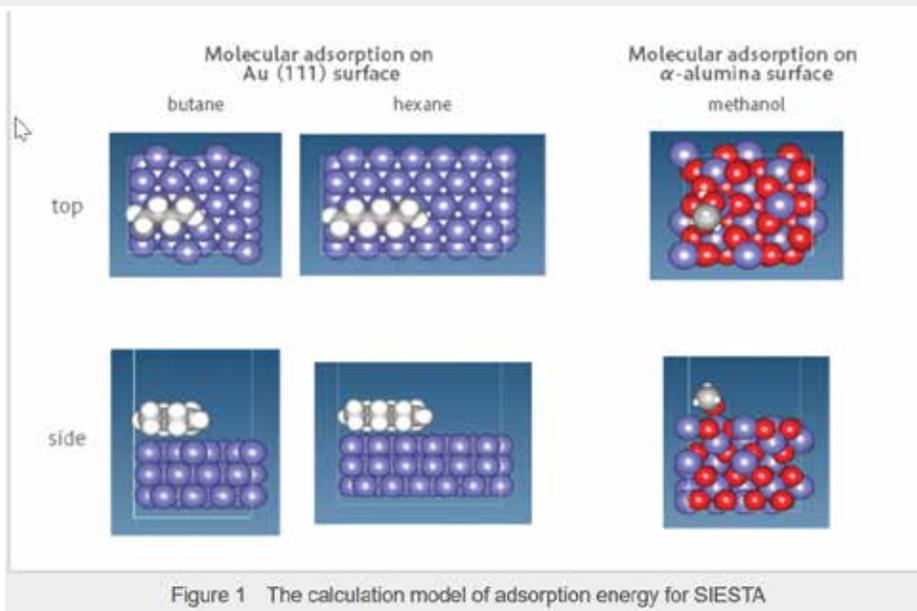


Figure 1 The calculation model of adsorption energy for SIESTA

Simulation result

Adsorption energies of alkane molecules on Au(111) were calculated using KBM functional, which takes into account van der Waals interaction. Obtained values are almost equivalent as the reference values [1]. For the α -alumina surface, calculation was performed by applying PW91 functional with according to the reference [2]. As a result, we obtained the result with an error of 0.1 eV. These results show that accurate calculations could be performed by SIESTA. (Figure 2)

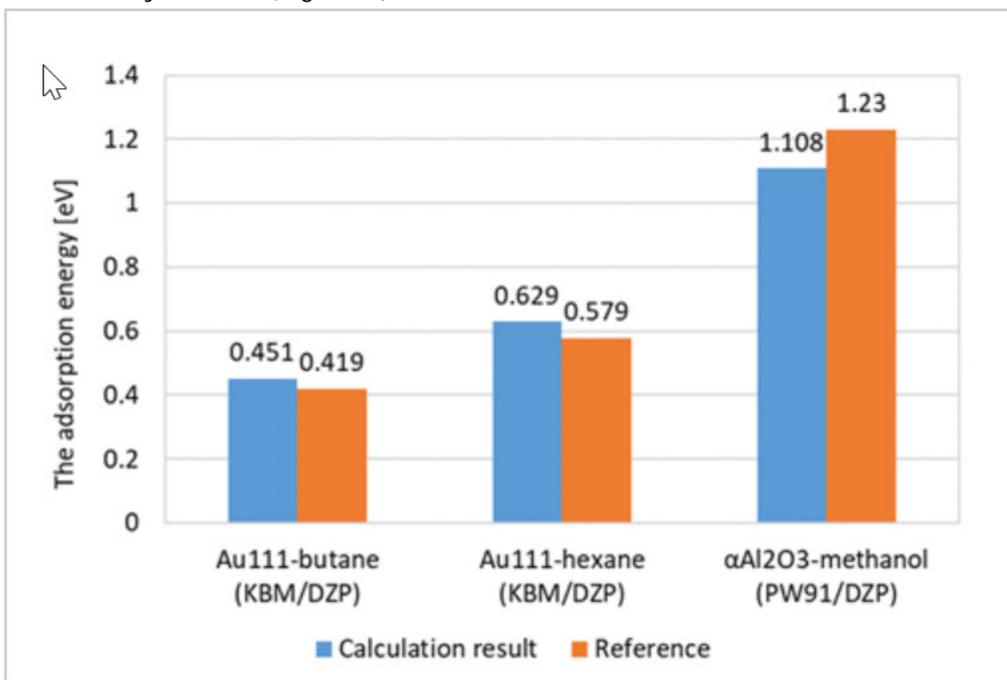


Figure2 Comparison of calculation results of adsorption energy by SIESTA with references

Reference

[1] Wetterer, S. M.; Lavrich, D. J.; Cummings, T.; Bernasek, S. L.; Scoles, G. J. Phys. Chem. 1998, 102, 9266

[2] Ø. Borck and E. Schröder, J. Phys. Condens. Matter, vol. 18, 1–12, 2006.

[Contact](#)



[Simulating Military Electronics from the Microchip to the Mission](#)

Published on April 21, 2020 -

by Robert Harwood

Engineers need to advance aerospace and military technology at an extraordinary rate to stay ahead of the threat in all domains of operation: air, sea, land and space.

To achieve this, military electronics systems are playing an increasingly critical role as a differentiator between otherwise similar hardware systems.



Picture of an F-35 Lightning II that is making a tight turn.

The F-35 aircraft is a great example. It may not be the fastest or the most maneuverable. However, its electronic systems ensure that it is able to counter any threat long before either of these factors become a concern. As a result, the pilot and the connected ecosystem the plane supports consistently stay ahead of the threat.

Some reports expect a cumulative \$480 billion will be spent on military electronics before the decade is out, further underscoring their importance. Yet, significant engineering challenges lay ahead if industry is to meet the demand for these complex systems. These challenges include ensuring the electronics deliver the required performance while also being:

- Secure
- Lightweight
- With the smallest possible form factors
- Power and thermally efficient
- Robust and reliable
- In harsh physical and electromagnetic environments
- Compatible with a myriad of other electronic components that are installed on modern platforms
- Affordable

Overcoming Military Electronics Engineering Challenges

To address these and other challenges, the military ecosystem is undergoing a digital transformation. In fact, over 90% of aerospace and military executives are willing to digitally transform their industry and business. Yet only about 10% have made substantial progress.

Closing this gap represents an increased military advantage. The faster it is closed, the greater the advantage.

Ansys works with third-party consultants and military industry veterans from the very top of their profession. This work has revealed that

simulation impacts the entire military acquisition process. Quantitative assessments suggest that simulation has:

- Accelerated program delivery by 20%
- Reduced labor requirements by 30%
- Reduced maintenance cycle times by 30%
- Due to digital twins

Realizing these gains is not straightforward. Ansys has identified that to be successful, organizations need to address five key simulation capabilities and measure their progress against them all. To learn more, these findings have been distilled into the eBook: *Staying Ahead of the Threat: Simulation from the microchip to the mission.*

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"Take aim, press print."

A project at Dstl has created a new technique which could offer on-demand, 3D-printed explosives at the front line.

Energetics experts are essential for defence and security; from forensic analysis to the protection of troops from explosive devices. Since recognising this national decline in the energetics sector, the MOD has since invested nearly £10 million, to combat the issue by establishing the Future Energetics Project in 2015. Subsequently, the Future Energetics Project has significantly invested in both people, technologies and equipment to develop this UK capability.

The Future Energetics Project has adopted an innovative research path, manned by early-career scientists and engineers, to explore the next 'big things' in energetics technologies. Graduates, Apprentices and more experienced staff on the project are heavily involved in research, explosives trials, novel energetics manufacture, blast modelling, chemical synthesis, thermal characterisation and small-scale hazard testing. This work has a direct impact on how the UK tackles ongoing threats, whilst rapidly building up experience in people for the future.

The Future Energetics Project has a number of aims including the development of new energetic materials, diagnostic methods to validate new materials and processing tasks with the benefit of sustaining the capability for the next generation. One of the most exciting developments is applying additive manufacturing – or 3D printing – to new explosive formulations.

3D printing explosives offers numerous benefits for potential users, including reducing storage and transport costs, and enhanced performance with reproducibility. Charges can be printed on demand, bespoke to requirements, in novel and intricate designs previously impossible to manufacture.

The energetic formulations for 3D printing are manufactured in a LabRAM resonant acoustic mixer, which uses acoustic energy rather than physical blades to mix materials, making it safer and more efficient to use. Many organisations are looking at different stages of 3D printing, but Dstl is the only place in the UK that is working on an end-to-end process of this kind with high explosives.

The 3D printing project is currently in testing stages, mainly focusing printer capabilities and material extrusion to then move on to examining explosive characteristics of a print including utilising charge geometry to create different explosive effects. Understanding what shape has what effect could lead to bespoke printing for individual missions in a warzone, providing an amplification of an effect with less material. As 3D printers give limitless possibilities, this is a real breakaway from traditional explosives.

A spokesperson from Dstl said:

“Without investment, the UK capability would die,”

“It’s up to MOD to make sure that doesn’t happen, as industry has limited or no capability in many critical areas.”

The funding – which has since grown, following early successes – has led to innovative research and has put the UK on track to ensure there are enough suitably qualified and experienced personnel across all areas.

The spokesperson said:

“Energetics knowledge and experience is vital for the UK to develop the best equipment, platforms and operational assets. We need to know how energetic systems damage or defeat our platforms and how we can counter threats,

so we can advise on things like countermeasures, detection, safety, transportation and disposal, all while working with explosives in accordance with legislation.

“Having this capability also means we can rigorously test and evaluate vehicles and systems against current and emerging threats to ensure they offer the required protection for armed forces. We also need to be able to support the police and counter-terrorism units who deal with explosions and homemade devices, such as the Manchester bombing in 2017.”

The Future Energetics Project has attracted people from a range of backgrounds such as forensic science, mathematics, chemistry, physics, graphic design, engineering and astrophysics. The need to improve UK energetics capability has been recognised by a number of national and international partners, and many activities are now available to develop skills.

Dstl played a critical role in establishing both the Centre of Excellence in Energetic Materials (CoEEM), a virtual centre based at Cranfield University which co-ordinates research and training; and the Sector Skills Strategy Group (SSSG) within the Institute of Explosives Engineers, which provides strategic direction to sustain explosives skills.

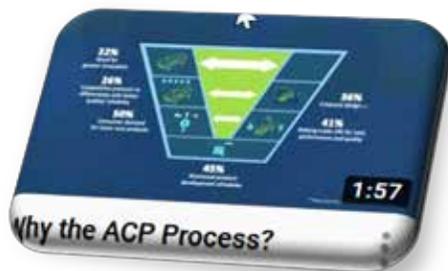


The ACP Process provides immense solutions for challenges facing the modern product development environment. The process is encapsulated in "ACP OpDesign," a new product developed by BETA CAE Systems and ETA.



[The ACP Process](#) provides immense solutions for challenges facing the modern product development environment. The process is encapsulated in an "OpDesign," a new product developed by ETA and BETA CAE Systems. The following video 'ACP Process Benefits' captures the essence of these vast solutions.

[The design of product](#) structures is driven by many competing criteria such as cost, performance and weight reduction, contrasted by enhanced multi-disciplinary performance, advanced materials and manufacturability - New technology is required to solve these challenges.



[The Accelerated Concept to Product](#) (ACP) Process revolutionizes the product design and development process through a holistic, performance-driven method.

FEANTM - May - YouTube Channel Showcase

[By Levity](#)



[By DaveCADFEA](#)

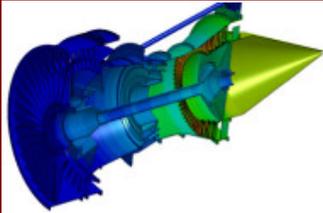


[By Ameen Topa](#)

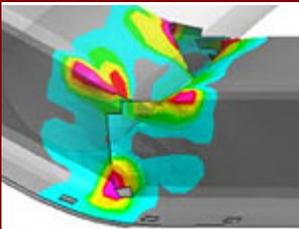




L. Benito Cia (GNS) - [Airbag Folding for LS-DYNA using Generator4](#)



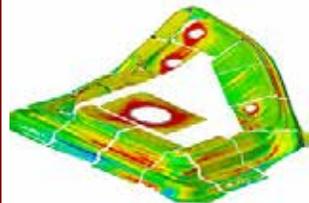
G. Blankenhorn - [Using a Rolls-Royce representative engine model to evaluate scalability of LS-DYNA thermal solvers](#)



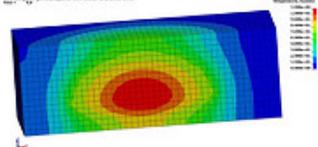
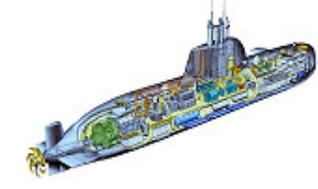
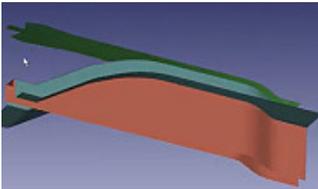
K. Saito - [A New Modelling for Damage Initiation and Propagation of Randomly-Oriented Thermoplastic Composites](#)



W. Lietz - [Undamped Extension of a Nose Landing Gear](#)

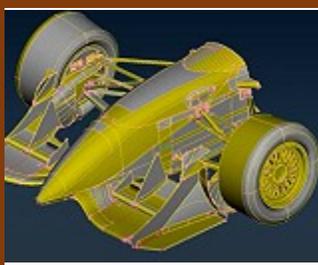
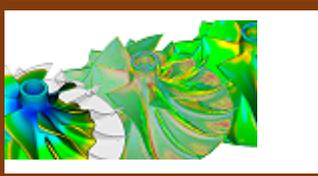


M. Schill - [Simulation of Sheet Metal Forming using Elastic Dies](#)

<p>FEA Information Magazine</p>	<p><u>March FEA Information News Magazine Issue</u></p>
	<p>D. Aggromito - <u>Application of Impact Simulation for Protective Barrier Design</u></p>
	<p>T. Klöppel - <u>LS-DYNA Developments in the Structural Conjugate Heat Transfer Solver</u></p>
	<p>A. Rühl, - <u>Bolted Joint Connections of FRP-Components in Submarines Subjected to Underwater Shock</u></p>
<p>Oasys PRIMER Bolt & Adhesive Connections</p>	<p>03/30/2020 - Gavin Newlands - <u>Oasys PRIMER Connections – Bolt and Adhesive Modelling</u></p>
	<p>03/23/2020 -Ameen Topa - <u>Tensile Test with Solid Elements and Variable Thickness Shells</u></p>
	<p>03/08/2020 - Total CAE - <u>Submit LS-DYNA to HPC Clusters and Cloud with TotalCAE</u></p>
	<p>03/02/2020- Jeanne He - <u>LS-FORM</u></p>

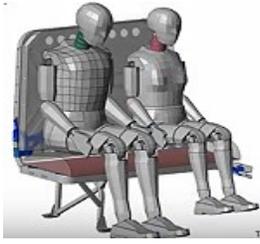
FEANTM - May - Guest Section

Editor Note - Marsha, our resident coffee drinker, is Editor of the guest Section.

	<p>05/04/ - I will name a coffee Formula 1 - a very fast blend.</p> <p><u>From BETA CAE Systems - Webinar - CFD geometry preparation of a Formula-type car</u></p>
	<p>04/27 - I SO love my virtual coffee AND now LS-DYNA Conference</p> <p><u>From ANSYS - LS-DYNA User Conference</u> will be a free virtual event June 10-11, 2020</p>
	<p>04/20 - This is to important to miss.</p> <p><u>From ESI Blog: Computers Unite: Fighting Back Against COVID-19</u> What's faster than the top seven supercomputers in the world, combined?</p>
	<p>04/13 - I think a molding process for my coffee cups is important - NOT!</p> <p><u>From Altair Blog: Dr. Wolfgang Korte for Better Simulation of the Vibration Behavior of Structural Parts</u></p>
	<p>04/06 - You can take my virtual coffee to a Virtual Conference</p> <p><u>Join Ansys at the New Virtual Conference: Simulation World</u> Online - free - June 10-11</p>

FEANTM - May - Previous Guest Section

Editor Note - Marsha, our resident coffee drinker, is Editor of the guest Section.



03/30 - I use tasting techniques to get my coffee to the correct results.

[Predictive will show you projects that involve nonlinear analysis techniques to arrive at the correct result.](#)



03/23 - Now I just need one for a tractor and I am set for the ranch.

[GM's all-new modular platform and battery system](#) (Photo by Steve Fecht for General Motors)



03/08 - I live on a ranch and I can use this to build a shed for hay, grain, saddles, tractor, COFFEE!

Kaizenat Support - [Factory Shed design using Solidworks 2020](#)



03/02 - I am SO glad my coffee machine does not give off emissions.

Keith Hanna - [You can save the planet with design & engineering simulation](#)



02/24 - And when we don't want a cup of coffee, how about some wine? BUT, keep in mind aeration.

Bill Kulp - [Can You Aerate Wine by Pouring it From the Bottle?](#)

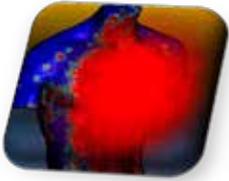


02/17 Recommended by J.Racso. Personally, I (Marsha) wish I kept my Chevy S-10.

[Crash Test 2019 Pickup Trucks – F150, Ram, Tundra, Titan](#)

FEANTM - May Month News

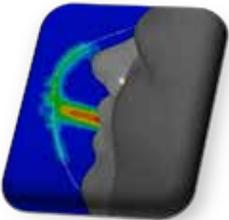
Editor Note - Our weekly website reviews, of course, with coffee references.



Monday 04/27/2020 - OUCH! Even watching this video makes me yell OUCH and hold my coffee cup up for protection. That will work - it is magical coffee called Kevlar repell with our chocolate magical repel blast spell.

[Blast on human torso with SPH Method in the LS-DYNA](#)

Cihan SAVAŞ - Did you ever think that what would happen if blast on human torso is performed ?



Monday 04/20/2020 - To enter my coffee shop you MUST have on your masks. If you can remember to put on a shirt, or tie, or skirt, or spike heels, you can certainly remember a mask. NOW, YES you can sip coffee by picking up the mask and not breathing at someone! I AM MAD at people breathing without masks! GRRRRRRR, snarl, snap, bite!

[LS-DYNA ICFD Solver is used to simulate porous flow through masks.](#)

For more information contact: support@kaizenat.com



Monday 04/13/2020 - Guess where I'm NOT taking my truck on our hill! WHY you ask? Fine, grab your Coffee To Go and we'll drive, flat terrain, over to YouTube to visit Ameen.

[Rollover Analysis of Pickup Truck](#)

Ameen Topa - LS-DYNA Rollover Analysis. In the starting part of the simulation, the vehicle rolls and falls to the ground due to the gravity load.

Monday 04/06/2020 - AND this week's coffee is called, Pin Ball Wizard with chocolate! and MORE chocolate so grab that to go cup and let's go play!

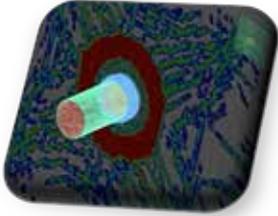
[Self-controlling pinball simulation using LS-DYNA](#)



Sensors in LS-DYNA are used to activate or deactivate other entities, such as boundary conditions and contacts, during an ongoing simulation. You can use sensors to add complexity to your model and make the model more self-controlling.

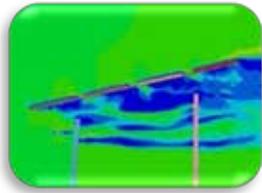
FEANTM - Previous

Editor Note - Our weekly website reviews, of course, with coffee references.



Monday 03/30/2020 - AND this week's coffee is called, Yuri with a hazlenut impact flavor! Grab that to go cup and we will head like a missile to YouTube. (oh stop groaning, I liked the missile reference)

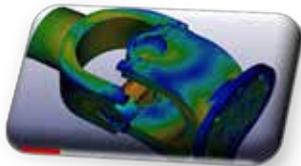
Yuri Novozilov [Simulation of a soft missile impact on reinforced concrete slab - Sugano impact test](#)



Monday 03/23/2020 - Today we have Blue Tokai Coffee AND another great video from Kaizenat Support. AND since I live in California Solar is important.

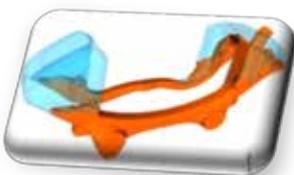
FSI(Fluid Structure Interaction) Simulation performed to study the [Solar Panel structure Response for the Cyclone Wind load.](#)

Monday 03/16/2020 - I apologize, but I'm exhausted and can't post. Tiki had major eye removal surgery on one eye. **03/30/2020** - He does amazing with one eye - he touches a wall, backs up and goes a different direction - Dog great, I am a nervous wreck wanting to keep guiding him.



Monday 03/08/2020 - Well, since I just replaced my transmission and driveshaft in my Ford Sport Trac, the below is crucial to me! This week we will have UJV. That stands for Universal Joint Coffee and as always with a tad of chocolate! NOW, let's get jogging to YouTube for aerobics for that chocolate calorie intake! OH like an intake manifold?

[LS-DYNA - Failure simulation of a universal joint](#)
Simu-K-Inc

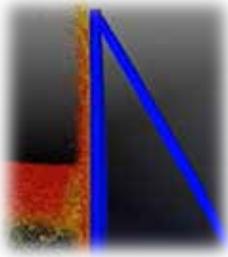


Monday 03/02/2020 - I like this filling simulation because my coffee cups fill like that! It would be nice to see the coffee swirl into a cup. SO off we go to YouTube at a jog, for cardio, and then we can drink coffee and have a muffin!

[3D Mold filling in Ls-Dyna using level set](#)

FEANTM - Previous

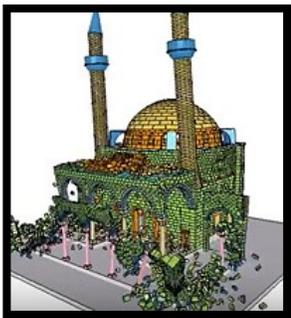
Editor Note - Our weekly website reviews, of course, with coffee references.



Monday 02/24/2020 - At times I think my coffee needs a protective screen! But it tastes so good I drink it to quickly so I guess we can just visit Simu-K Inc and their below simulation.

Simu-K Inc. - [Simulation of a protective screen for tank fail](#)

A multiphysique simulation with LS-Dyna. Liquid is modeled with SPH and the protective screen use finite element with material plasticity.



Monday 02/17/2020 - I know where I don't want to be standing drinking my coffee! The simulation below is earthquake - All I can think of is RUN! Now, that is scary!

[LS-DYNA Simulation of the collapse of Takiyya al Sulaymaniyya](#) under earthquake loads has been done in LS-DYNA.



Monday 02/10/2020 - Well, now I know what my car will look like if I run into one of the below wires. But my vehicle starts yelling at me if I go off the line it wants. It shakes the wheel; it screams - COFFEE USE BRAKE! COFFEE WATCH LANE - you would think it wants to own a coffee shop and has its flavors picked out!

[Car impact into wire rope safety barrier](#)

Simulation of an impact of a 900 kg car toa wire rope safety barrier.



Monday 02/03/2020 - Cafe Coil is our new product. It is small and will heat your coffee which is why I have the below simulation. Pop Quiz - What software rules Heat Transfer? No coffee for you if you didn't answer LS-DYNA.

[LS-DYNA conjugate heat transfer in a coil heated by an electric current](#)

Predicting the temperature of the coil to which a current is applied.

FEANTM - May - C&G coffee & gossip

Editor Note - Good news is Marsha is done (hopefully) with pictures of clouds!



05/04/2020 - It is BABY bunny time of year and baby squirrel. Okay baby rattle snakes but not in the pictures and they meet a bad ending, if they come on the property,



04/27/2020 - SEE, even the cattle can do social distancing! They moo to each other and have grazing together BUT at a safe MOOOO distance.

NOW on a scale of 1-10 how dumb was this post? NO, I don't want to know your answer to the question!



04/20/2020 - Just wanted to post one of my favorite older pictures and YES he is still on the ranch - they are now nesting! Will have little owlies!



04/13/2020 - Okay, due to the information about clouds and the question of why all the cloud pictures you will be pleased that I have a picture of Romo trying his Virus Mask or his look of What Is She Trying To Put On My NOSE?



04/06/2020 What was that collective groan of oh NOT another cloud picture??? Well, shelter in place and it's raining - the horses are in their stalls - birds are somewhere until feed. SO, that leaves the only changing thing right now between rain and shelter in place is clouds! C&C Clouds and Coffee. BUT my husband said he will move the Kubota so I can get it in a good picture - WOW that's exciting - NOT! So be prepared for Shelter In Place Tractor Pictures!

FEANTM - May - YES, it is my sky pictures & Gossip

Editor Note - We had no choice. Marsha commandeered this page for more of her cloud pictures.



