

October 21, 2019

FEA Not To Miss Engineers

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Engineers Making A Difference



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10/21/2019 - Zhidong Han - LSTC

We welcome Zhidong with a special blend of coffee called *work/fun chocolate*.

Zhidong quoted, “Work is not supposed to be fun. That’s why it’s called work.” “No, that shouldn’t be true. At LSTC, work is a fun space.”

Dr. Han has been working on DYNA since 2004 and joined LSTC in 2011, as a senior scientist. He continued his adventure in the MPP contact with features such as groupable, consistency, non-blocking, and other features. "It's fun to combine them all into the contact, so that they all work seamlessly." Said Zhidong.

He will talk about these features in the MPP contact workshops during the LS-DYNA users' conferences in China, Taiwan, and at the LS-DYNA International Users Conference in 2020 Detroit, MI.

Dr. Han's research interests lie in the disciplinary areas of: theoretical, applied, and computational mechanics of solids; meshless, boundary element and other novel computational methods; and fracture & rupture dynamics.

He developed the unified continuum and discrete mechanics for fracture/rupture analysis and published as:

Part I: Eshelby Stress Tensor T : a Variety of Conservation Laws for T in Finite Deformation Anisotropic Hyperelastic Solid & Defect Mechanics, and the MLPG-Eshelby Method in Computational Finite Deformation Solid Mechanics.

Part II: On the (Meshless Local Petrov-Galerkin) MLPG-Eshelby Method in Computational Finite Deformation Solid Mechanics, CMES-Computer Modeling in Engineering & Sciences, 97, 2014

A comprehensive list of his publications is available on

Google Scholar: <https://scholar.google.com/citations?user=nVsdBdkAAAAJ&hl=en>



10/14/2019 - Yun Huang - LSTC

I am going to welcome Yun with a cup of coffee made in our new NO noise-vibration coffee maker. I thought it would be unique since Yun excels at noise-vibration analysis, among other features in LS-DYNA. So, grab your to-go coffee cup and meet Yun for a cup of coffee.

Dr. Yun Huang graduated from the department of Civil Engineering, University of Minnesota in 2006.

He joined LSTC as a senior scientist/software developer in 2006 and has been working on the Research and code development of frequency domain analysis functionalities in LS-DYNA since then.

He has developed a series of frequency domain features in LS-DYNA, such as FRF, SSD, random vibration, response spectrum analysis, acoustic analysis based on FEM and BEM, and fatigue analysis. These features can find significant applications in many industry fields, including NVH of vehicles, noise simulation of engines; numerical simulation of shaker table testing; durability analysis of metal structures, acoustic property analysis of sports equipment, and seismic analysis of civil and hydraulic structures and nuclear powerplants.

Suggested Reading from LS-DYNA Conferences:

- [New Options in Frequency Domain Analysis and Fatigue Analysis with LS-DYNA](#)
 - [DDAM Analysis with LS-DYNA](#)
 - [Advances in Fatigue Analysis with LS-DYNA](#)
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Previous Months



09/30/2019 Dr. Al Tabiei - Isdyna-online.com

Al has his interactive on-line classes and additionally teaches at LSTC
www.Isdyna-online.com atabiei@Isdyna-online.com

Dr. Al Tabiei has been a consultant on the use of large scale finite element simulation for more than 25 years and he was the director of the Center of Excellence in DYNA3D Analysis at the University of Cincinnati (1997-2001). He has more than 150 journal, refereed reports, and conferences papers.

A few of his classes are: Introduction to LS-DYNA - Composites in LS-DYNA - Fracture, Damage, & Failure - Fluid Structure Interaction - Material Models Tests to Simulation



09/16/2019 Dilip Bhalsod LSTC

HEY DILIP, Come on down!

Pop quiz and we'll call it "From the UK to Detroit" Where did Dilip start out?

Answer: automotive industry at British Leyland, UK in 1978.

Luckily for us and General Motors he came here to the US and from 1984 to 2004 Dilip worked at General Motors USA for 20 years on various aspects of automotive crash analysis and provided LS-DYNA technical support.

Now why is that important you ask? Well, did you ever try to call someone and they can't answer your technical question? OH WAIT, like asking me and instead I tell you how to saddle a horse (yes, I really can do that but not engineering)

And then LSTC wisely grabbed him. No, they did NOT kidnap him. From 2004 to 2016, he was Technical Manager at LSTC's office in Michigan where he was responsible for LS-DYNA technical support.

And then I (meaning me, Marsha) retired to blog and Dilip Bhalsod ALSO became the LSTC Global Business Manager, responsible for America and Europe distributor management, sales, marketing, Vendor, and alliance partners.

AND on top of that he does simulations I love to watch - [GO FOOTBALL!](#)



09/09/2019 Thierry Marchal ANSYS

I can guarantee aside from a nice cup of coffee, that Thierry is passionate about biomedical engineering.

NOW, why was I interested? On his blog he asked a question and I found it interesting

. Thierry said, "Imagine building a digital twin of the patient specific cardiovascular system" THAT would be great and if I needed it in the future I know that I'd feel SO much safer if they did something on my digital twin first!

I never knew who Rene Favaloro was. Do you? NO! Well then it is a must read on heart surgery.
[Argentinian heart surgeon Rene Favaloro](#)



09/02/2019 George Laird of Predictive Engineering

HEY, George! Want a pitcher of coffee?

So, on George's very own blog he has some great articles. One I liked of his is because he answers the question, "What is the difference between a design engineer and a simulation engineer?"

["How to Become a Journeyman Simulation Engineer"](#) And I quote George, "It is an inside joke among simulation engineers about how long does it take to be considered a "journeyman" simulation engineer. The answer is about five years since it takes that long for your mistakes to catch up with you!"



08/26/19 Steve Pilz of ANSYS

Let's welcome Steve with a cup of coffee and a shout out: "YO, Steve!"

Now, a few months ago Steve did a blog on Additive Manufacturing.

[**Simplify Inspections of Additive Manufactured Parts with CT Scanning and Mechanical Simulation**](#)

What is Additive Manufacturing you ask? Well, that's a darn good question. I had to look it up. It's joining materials to make objects from 3D model data, usually layer upon layer. Sounds easy? Nope - it isn't! SO, Steve explains in his blog what the issues are, since it was a tad confusing to me without his explanation.

"Quality assurance inspections prove that additive manufacturing (AM) a perfect part is a lot harder than many engineers thought."