

## Improving Structural Integrity through MoldSim Integration

### Introduction

Short fiber reinforced plastic parts are often used in many applications, for example consumer goods, electrical industry, automobile manufacturing, aerospace, shipbuilding and even medical technology.

In order to simulate the real-world behavior of these plastic parts, it is necessary to tightly integrate both injection molding process and the structural mechanical behavior. Taking advantage of "MoldSim inside ANSYS", it is possible to transfer results from world-leading Molding Simulation Software such as Moldflow and Moldex to ANSYS, which is the world-leading multi-discipline simulation software for performing accurate, robust structural and vibration analysis.

MoldSim allows users to transfer the influences of important injection parameters as plastic material properties, fiber properties, warpages, residual stresses, fiber orientations and fiber content for calculating the structural behavior of the plastic part inside ANSYS Workbench. The user can then optimally combine with physical real-world structural constraints/loads inside ANSYS quickly to simulate the real strength of the plastic part in question.

### Objectives

This workshop will provide a quick glance on the necessity and ease of integrating Moldflow Analysis results in to performing actual structural analysis simulation of the plastic part inside ANSYS. Apart from that, a quick hands-on session will allow attendees to gain a more in depth feel and understanding on how integrated simulation greatly helps to optimize plastic part design.

### Benefits

- Learn new ways to improve structural integrity of plastic parts
- By implementing MoldSim analysis in the early stages of part and mold design, part owners can quickly evaluate the manufacturability of their designs to achieve the highest quality at the lowest cost in the shortest time to market.

### Who Should Attend

R&D engineers, Managers and Directors involved in Plastic part Product design and manufacturing

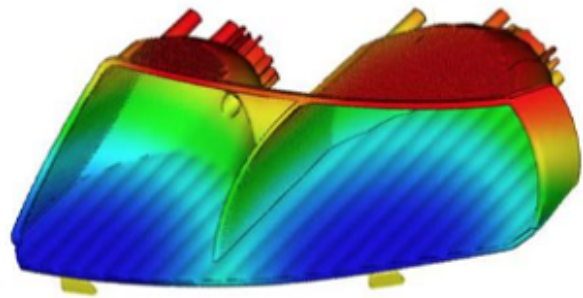
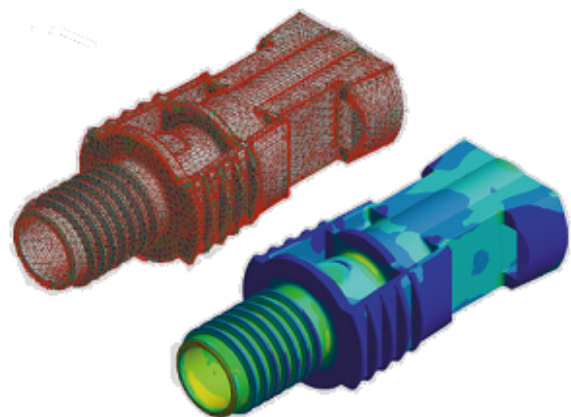


Image courtesy of Automotive Lighting  
Reutlingen GmbH



**MoldSim: The direct route from  
injection molding for structural  
mechanics**

## What customers say about our solutions

"We use ANSYS as a **virtual laboratory**, since ANSYS code is **really close to the actual physics**. It assures you when something is a good idea — and **demonstrates clearly when a design fails**."

**Benjamin Hagege, Assistant Professor, University of Technology of Compiègne**

"Our customers want to buy state-of-the-art turbines that have proven technology and are able to run 20 years without any major problems. To achieve such **strong structural components**, ANSYS is very important for us."

**Michael Schuld, Team Leader Structural Engineering, PowerWind**

"All our customers want answers to their questions really fast. And it's implicit that they want accurate answers. There are plenty of tools around that give you an answer very quickly, but it's more difficult to find a tool that is **both accurate and quick at the same time**. That's ANSYS."

**Jonas Persson, Technical Manager, ST-Ericsson**

## Presenter Profile



Singaram Ravi is currently working as an Assistant Business Manager (PLM) in CADEM Technology Center Pte Ltd, a subsidiary of CAD-IT. He is in charge of providing pre- and post-sales technical support for Catia, Enovia, Valor and Moldflow PLM solutions. He obtained his M.Sc. (Computer integrated Manufacturing) degree from Nanyang Technological University (NTU), Singapore, a Post-Graduate Diploma in Tool Design from the Central Institute Of Tool Design (India) following his Mechanical Engineering Degree.

Ravi has more than 20 years of industrial experience - as a designer in jigs & fixtures, a CAM programmer in Plastics Injection Molding manufacturing, an Applications Engineer supporting Pro-Engineer products and a Support Manager for Dassault Systemes Catia / SmarTeam PLM products.

## Event Information

**Date** : 26th June 2015 (Friday)  
**Time** : 9:00 am - 12:00 noon  
**Venue** : CAD-IT Consultants (Asia) Pte Ltd  
159 Sin Ming Road, #03-05 Amtech Building, Singapore 575625 ([view map](#))

[Register NOW](#)

- Register online for this event.
- CAD-IT Consultants reserves the right to cancel or postpone the event due to unforeseen circumstances.

**For enquiries, please call 6508-7575 or email at [caditevents@cadit.com.sg](mailto:caditevents@cadit.com.sg)**

## About CAD-IT Consultants

Founded in 1991, CAD-IT is a leading global ISO 9001:2008 certified Product Life Cycle Management (PLM), manufacturing and education provider. CAD-IT's mission is to provide world-class solutions and services that enable companies and their supply chains to achieve greater product innovation, quality and productivity with drastically reduced time-to-market and costs.

CAD-IT is honored to have received over 80 international and national awards since its inception for marketing and service excellence. Among its most recent accolades are the Singapore Enterprise 50 Award (2014, 2013, 2012), Singapore SME 1000 (2014, 2013, 2012, 2011), Asia Pacific Entrepreneur Award (APEA) - Outstanding Entrepreneur Award (2012, 2010, 2009), the Singapore Prestige Brand Award SPBA - Established Brand Award (2012, 2011, 2010, 2009), SPBA - Regional Brand Award 2012 and SPBA - Hall of Fame 2012.

CAD-IT Consultants' suite of PLM solutions include ANSYS (System-level, Multiphysics Simulation), Goldfire Innovator (Innovation Process Management), Moldflow (Plastics CAE), Stampack (Sheet Metal Forming), Deform (Bulk Metal Forming CAE), SpaceClaim (3D Direct Modeler), Mentor Graphics Valor DFM (Design For Manufacturing), Valor MSS (Complete Manufacturing Execution Suite) and Cortona3D (3D Technical Documentation).

Since February 2010, CAD-IT has partnered the Singapore Workforce Development Agency (WDA) to offer Advanced Certificate courses in PLM and Engineering Simulation, under the Workforce Skills Qualifications (WSQ) framework, with the charter to upgrade the technological capabilities of organizations in Singapore so as to enable them to undertake high value-add design, engineering, manufacturing and R&D activities.



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