

Scheduled presentations

Isogeometric Analysis of local deformation and fracture for automotive frames

Kenji Takada

Honda R&D Co., Ltd. Automobile R&D Center

The totally new evaluation scheme of JNCAP from 2020

Prof. Sadayuki Ujihashi

BETA CAE Systems Japan

BMW - Next Level Engineering: digitalization of know-how in vehicle development

Gagan Saket¹, Hans-Peter Daunert¹, Michael Tryfonidis²

¹BMW Group, ²BETA CAE Systems

ANSA/META deployment in Groupe PSA

Jean-Christophe Carniel

Groupe PSA

Bringing reality into the virtual world

Eric DeHoff¹, Kishore Pydimarry¹, Santosh Patil²

¹Honda R&D Americas, Inc., ²BETA CAE Systems USA

RENAULT Model Factory: management of Model Building

Laurent Noyelle

RENAULT SA

FE-Basis Model, The birth of a digital assembly line

Paul-Eduard Munch

Dr.Ing.h.c.F. Porsche AG

Automation of pre- and post-processing in Ferrari GT cars project

Dr. Luciano Mariella, Rubens Curatola

Ferrari S.p.A

BMW - Next Level Engineering: utilizing digitalized know-how through Machine Learning

Gagan Saket¹, Michael Tryfonidis², Dimitrios Siskos³

¹BMW Group, ²BETA CAE Systems, ³BETA CAE Systems International

Complete vehicle CAD extraction, translation and quality report generation at CEVT

Jesper Bäcklund

China Euro Vehicle Technology AB

CAE Data Management and Standard Process Tooling: storyboard from RENAULT Group

Model Factory

Jeremie Gomez

RENAULT SA

Future Model-build-up process in ANSA using MODULES

Dr. Jürgen Bruns

Volkswagen AG

Automated checklist for intermediate deliveries

Julien Barbier
Groupe PSA

Lead time reduction - Fast and easy setup of structure load cases using ANSA

Dr. Christoph Thiem
Opel Automobile GmbH

VR-Supported Engineering Processes at Daimler

Andreas Pau
Daimler AG

ANSA: one of the CAE analysts' best friends

Dr. Emiliano Costa, Sergio Macchiavello, Alberto Rossi, Maurizio Iannolo, Alessandro Bozzolo, Andrea Trevisi
RINA Consulting

Usage of META to visualize max-stress locations for multiple load cases in part/assembly

Vishal Dattawade, Prithviraj Eluri
Semcon India Pvt Ltd

Composite life prediction model for leaf springs using Finite Element model and testing

Kishore Mysore Nagaraja, Hrushikesh Patil, Sharanbassappa Patil, Suresh Nagesh
PES University

Case Study: collaboration for advanced process automation, General Motors & BETA CAE

Joshua Sims¹, Scott Larsen²
¹BETA CAE Systems USA, ²General Motors

CAD shape recognition and mesh generation technique using ANSA script

Koji Otani
Integral Technology Co., Ltd.

Crash Management System optimization tool in ANSA and META

Mr. Pedro Ruiz, Ricardo Liñan, Alvaro Arconada
SOLUTE

Crash loadcase setup using Include Configurator tool

Rajiv Pillai
Volvo Group Trucks Technology

CAE modeling of bolts for crash

Mr. Jens Raine, Per-Anders Eggertsen, Simon Rydberg
Volvo Cars Corporation

Crash Load Paths Analysis based on Field Line Visualization in META post-processor

Lailong Song¹, Rainer Moll², Michael Tryfonidis³, Sideridis Athanasios³, Fabian Duddeck⁴
¹BMW Group, ²IDIADA Fahrzeugtechnik GmbH, ³BETA CAE Systems, ⁴Technical University of Munich

Stamp-Crash Process: coupling of Forming and Crash Simulations at BMW

Dr. Janine Mergel¹, Andreas Ickes¹, Marcel Meder¹, Michael Tryfonidis², Helga Reith¹
¹BMW Group, ²BETA CAE Systems

Modelling of detailed subject-specific FE rib models for fracture prediction

Dr. Johan Iraeus¹, Linus Lundin², Simon Storm², Bengt Pipkorn³
¹Chalmers University of Technology, ²ÅF Industry, ³Autoliv Development

ANSA for FMVSS201U: a flexible process

Thanassis Fokylidis¹, Israel Corriolo², Carlos Cano², Hector Hernandez², Joanna Rakowska³
¹BETA CAE Systems, ²FORD of Mexico, ³FORD Motor Company

Automation process for Occupant Safety models with ANSA and LS-DYNA

Dimitrios Perperidis, Michael Meyer, Maximilian Beck, Matthias Bauer, Bruno Clement, Peter Protsch
PSW automotive Engineering GmbH

Evaluation of occupant injury results using META focus on THOR

Fabian Heil, Ricardo Tejero de la Piedra
Opel Automobile GmbH

Cellbond-Phitec Finite Element Q-series Crash-Test-Dummy seating procedure, ANSA perspective

Daniele Speziani¹, Petros Goutas², Chamila Bamunuarachchige², Elena Riscaldina¹, Michela Vaira¹
¹Phitec Ingegneria Srl, ²Cellbond²

Building a full UAV aerodynamic database using ANSA pre-processor automated meshing tool

Danny Gilad
Elbit Systems

Aerodynamic Design of Unmanned Aerial Vehicles with innovative layouts, using low and high-fidelity numerical tools

Prof. Kyros Yakinthos¹, Pericles Panagiotou², Pavlos Kaparos²
¹Aristotle University of Thessaloniki, ²UAV-iRC

Computational Haemodynamics in arterial geometries in relation to obesity-induced cardiovascular diseases

Dr. Asimina Kazakidi
University of Strathclyde

Investigation of aerodynamic loading on a train pantograph

Dr. Konstantinos Ritos, Craig Roddick, Dr. Ioannis Kokkinakis
University of Strathclyde

Multidisciplinary simulation of automotive water pumps

Dr. Remo De Donno
Industrie Saleri Italo

Design and CFD analysis of a new rotary gas compressor

Dimitris Vogiatzis¹, Evangelos Mallios¹, Michalis Garbounis¹, Savvas Savvakis¹, ²Zisis Samaras,
¹theSARMproject, ²Aristotle University of Thessaloniki

CAE processes at MAHLE Thermal Management

Dr. Albrecht Gehring, Dr. Maria Baiker, Dr. Wolfram Kühnel
MAHLE

The pre-processing priority in Fluid-Dynamics Design

Dr. Marco Maganzi^{1,2}, Giovanni Lombardi¹, Antonio Ercoli¹
¹University of Pisa, ²CubitLab

External Flow Analysis (CFD) for an Airborne Gimbal

David Lozano
Elbit Systems – ISTAR

Impact of transcatheter valve size on the estimation of paravalvular leakage: an FSI study

Laura Iannetti¹, Giulia Luraghi², Claudio Chiastra², José Félix Rodríguez Matas², Francesco
Migliavacca²

¹BETA CAE Italy, ²LaBS, Department of Chemistry, Materials and Chemical Engineering,
Politecnico di Milano

Efficient watertight preparation tools and methods for CFD meshing at PSA group

Nikolaos Batsaris¹, Gael Roy²
¹BETA CAE Systems, ²PSA Group

Roof racks aerodynamic optimization for a utility vehicle

Inaki Caldichoury, Facundo Del Pin, Rodrigo Paz, Chien-Jung Huang
LSTC

Modelling of casting structures - A comprehensive investigation

Dr. Octavian Knoll¹, Michael Tryfonidis²
¹BMW Group, ²BETA CAE Systems

Development of an efficient tool for modelling plastic parts using Machine Learning

Yoshikazu Nakagawa¹, Osamu Ito¹, Prakash Krishnaswamy², Umesh Mallikarjunaiah²
¹Honda R&D Co., Ltd., ²Xitadel CAE Technologies India Pvt Ltd.

Fast flow simulation using combination of MOLDEX3D and ANSA/META

Jing Jin, Jeffrey Cao
BASF(China) Co., Ltd

Connection model automatic creation tool development at vehicle CAE model building

Takashi Nasu
Nissan Automotive Technology / Vehicle CAE center

Multi Material Modeling with ANSA: an Application in the Automated Assembly Process at FORD

Tunc Uzun¹, Heiko Wuestner¹, Thanassis Fokylidis², Niels Pasligh^{1,3}, Vangelis Karatsis², Chien
Ping Mark Ng⁴
¹Ford Werke GmbH, ²BETA CAE Systems, ³RIC Aachen, ⁴Ford Motor Company of Australia Ltd

NVH post-processing automation

Dr. Martin Schönecker
Opel Automobile GmbH, Groupe PSA

Standardization of X-Attribute body assessment by coupling FEM and MKS

Emilie Debauche¹, Markus Wick², Markus Herbst³
¹Arrk P+Z Engineering, ²Ford Werke GmbH, ³BETA CAE Systems

Efficient time dependent reliability analysis of large systems under Non-Gaussian loading

Santosh Patil¹, Zissimos P. Mourelatos², Vasiliki Tsianika¹, Dimitrios Papadimitriou¹
BETA CAE Systems USA, ²Oakland University

Simulating installed antenna performance for automotive radar applications

Dr. Christos Liontas, Stefan Frank
Fraunhofer FHR

Specific Absorption Rate Electromagnetic (EM) Simulations in adult and Child tissues

Michel Alhilani¹, Seyed Reza Atefi², Lilla Zollei², Mohammad Mansouri², Filiz Yetisir¹, Michael H. Lev², P. Ellen Grant³, and Giorgio Bonmassar²
¹Newborn Medicine, Boston Children's Hospital/ Harvard Medical School, ²Radiology, Massachusetts General Hospital/ Harvard Medical School, ³Newborn Medicine, Radiology, Boston Children's Hospital/ Harvard Medical School,
Presented by Milton Pena, BETA CAE Nordic

Efficient screening of composite structures using the extended 2D FEM approach in META

together with a state-of-the-art Failure Initiation criterion
Henrik Molker, Renaud Gutkin, Annika Lundberg
Volvo Car Corporation

The use ANSA and META for the simulation of components made in CFRP in Lamborghini

Paolo Ponzio, Karsten Schuffenhauer
Automobili Lamborghini S.p.a.

Fully automated parameterized model creation of ultra-lightweight carbon fiber wrapped components in ANSA

Pascoe Scholle
LASSO GmbH

Facilitating the industrial implementation of an adaptive Isogeometric Continuum shell element for efficient laminate analysis

Camiel Adams¹, Martin Fagerstrom¹, Joris J.C. Remmers², Anastasios Vafeidis³
¹Chalmers University of Technology, ²University of Technology Eindhoven, ³BETA CAE Systems

Lattice Structures modeling: introduction to homogenization

Nikoleta Pasvanti¹, Andreas Psarros¹, George Korbetis², Andreas Vlahinos³, Athanassios Mihailidis¹
¹Aristotle University of Thessaloniki, ²BETA CAE Systems, ³Advanced Engineering Solutions

Rapid remodeling in ANSA/META for Additive Manufacturing design optimization

Xiao Chen¹, ²George Korbetis, ²Panagiotis Pantazidis, ²Dimitrios Drougkas

¹Ford Werke GmbH, ²BETA CAE Systems

Multi-level optimisation for mixed material structural problems using ANSA & META

Drew Smith¹, Nick Kalargeros²

¹FAR UK, ²Jaguar Land Rover

Improvement of evaluation efficiency by 3D report

Seiichi Takakuwa

Honda R&D Co.,Ltd Automobile Center

Superelement welds for productive car development

Nils Himmelsbach¹, Christian Graber¹, Michael Tryfonidis²

¹BMW Group, ²BETA CAE Systems

Migration of a post-processing process: from Medina to META

Urs Stefan Jedrkowiak, Thomas Brandt, Alexander Schwarzkopf

Rheinmetall Automotive AG

Gait specific optimization of athletic footwear

Alexander Tsouknidas¹, Katerina Tzolva², Dimitris Drougkas², Evangelos Karatsis², Maria

Papagiannaki³, Fotini Arabatzi³

¹University of Western Macedonia, ²BETA CAE Systems, ³Aristotle University of Thessaloniki

Fatigue failure analysis of a humeral implant: a Finite Element approach

Shivkumar Umadi^{1,2}, Vyjayanthi Murthy², Dr. Suresh Nagesh², Dr. Venkateswaran Perumal³

¹CORI, ²PES University, ³Stryker

Automated report generation of corrosion protection simulations

Yannick van Dijk, Elmar Stegmayer, Timo Hopf

BMW Group

ANSA as pre-processor for Code_aster

Roman Fratczak, Maciej Czaplinski

Nobo Solutions

Automation of multi-disciplinary analysis processes with ANSA/META and optiSLang

Dr. Lars Gräning

Dynardo GmbH

Multidisciplinary spotweld optimization using OPTIM WELDS

Ravi Nimbalkar¹, Tyler Jankowiak¹, Vasanth Gandhi¹, Rabin Bhojan², Amol Kurane², Alexandra

Coppe²

¹BETA CAE Systems USA, ²Ford Motor Company

The ANSA / LS-DYNA approach for Isogeometric Analysis (IGA) Simulations

Lambros Rorris¹, Attila Nagy², Stefan Hartmann³, Ioannis Chalkidis⁴, Anastasios Vafeidis⁴

¹BETA CAE Systems International, ²Livermore Software Technology Corporation, ³DYNAmore

GmbH, ⁴BETA CAE Systems

Connecting Design and Analysis: Explicit Isogeometric Analysis using ANSA and LS-DYNA

Lukas Leidinger¹, Stefan Hartmann², Lambros Rorris³, Roland Wüchner⁴, Fabian Duddeck⁴, Lailong Song¹

¹BMW Group, ²DYNAmore GmbH, ³BETA CAE Systems International, TUM Department of Civil, Geo and Environmental Engineering, ⁴Technical University of Munich

Scripting and the World Beyond

Constantin Diez

LASSO GmbH

**Presentations
by BETA CAE Systems**

Latest Developments & New Products in BETA's product line

Chryssa Sferidou

BETA CAE Systems

Future developments in BETA's product line

Dimitrios Siskos

BETA CAE Systems International

Multidisciplinary topology and parametric optimization of a BiW, following a unique holistic Process within ACP OpDesign

Alexis Kaloudis

BETA CAE Systems International

Quality management of CAE data within a SPDM environment

Spyridon Tzamtzis, Irene Makropoulou, Menelaos Pappas

BETA CAE Systems

Beam modeling: new developments

Kostas Skolarikis

BETA CAE Systems International

Efficient handling of CFD results through compression

Aristotelis Iordanidis

BETA CAE Systems

Latest Development in Volume Meshing for CFD

Vangelis Skaperdas

BETA CAE Systems

Comprehensive Simulation Run Management: solutions for analysts and model building teams

Irene Makropoulou

BETA CAE Systems

How Compare-function can become the secret ingredient for reducing model build-up effort

Michael Tryfonidis

BETA CAE Systems

Advancements in batch model preparation with the SDM-Console

Michael Tryfonidis

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Unleashing the full potential of ANSA meshing capabilities for RTM analysis

Panagiotis Fotopoulos

BETA CAE Systems

Substructuring tools for effective pre- and post-processing

Nikolaos Nikoglou

BETA CAE Systems

FEA Tire simulation

Athanasios Papadopoulos

BETA CAE Systems

Non-Linear multi-scale modelling of composites using ANSA tools

Vangelis Palaiokastritis, Eleftherios Tsivolas

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Applying the VMAP interface standard in ANSA for multi-solver simulation processes

Athanasios Fassas, Dr. Georgios Mokios

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Feature based morphing: a radical change in concept and detailed modeling

Eva Ioannou, George Korbetis

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Addressing the challenge of late design stage optimization: a passenger car Side Impact case

Michael Tryfonidis, Eva Ioannou

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Automated Morphing and Optimization of blade assemblies in aerospace and automotive applications

Raghu Mohan Reddy Suravaram, Ravi Nimbalkar, Joshua Sims

BETA CAE Systems USA

Metadb as a high-performance results container

Antonis Perifanis

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