

Simulation and Visualisation Fact Sheet

Numerical simulation methods are used to design and optimize new products and production processes. Material parameters and component deformation behaviour have a significant influence on the accuracy of simulation calculations and their reliability.

GOM's optical measuring systems provide full-field information on material characteristics, 3D surface geometry and the forming behaviour of sheet metal parts. These are valuable input parameters for simulation processes.

In addition, ARAMIS and ARGUS are used to validate numerical simulations by calculating the differences between experimental measurement and FE data. GOM software enables the import, 3D registration and mapping of FEA results against real measurement results.

A simple, fast and direct comparison of FEA data is supported by importing FEA result data sets, including: ABAQUS, LS-DYNA, PAM-STAMP, Auto Form, and ASCII...

GOM software enables full-field comparison of FEA data sets with experimental measurements and analysis of geometry, deformation, displacements and strain values. This full-field comparison between FEA data sets and experimental data allows easy verification of finite element calculations and improvements to the finite element model, thus speeding up product design cycles and product development times by providing:

- Input parameters for design and simulation, allowing a more accurate material model and prediction of material behaviour.
- First article inspection for fast and reliable prototype analysis and identification of problems.
- Quick and reliable feedback for design changes or optimization of simulations, reducing iteration steps in the product development cycle.
- Quality control flanking series production to enable fast troubleshooting.
- Valuable know-how for the development of products to reduce future product development times.

