



Leading MBS Technology  
for Technology Leaders

# SIMPACT

# Drivetrain

## APPLICATION

**SIMPACT Drivetrain** is an application primarily used for simulating drivetrains within the automotive, wind turbine and railway sectors, but can also be applied to any field of engineering where power transmission is required.

## Applications

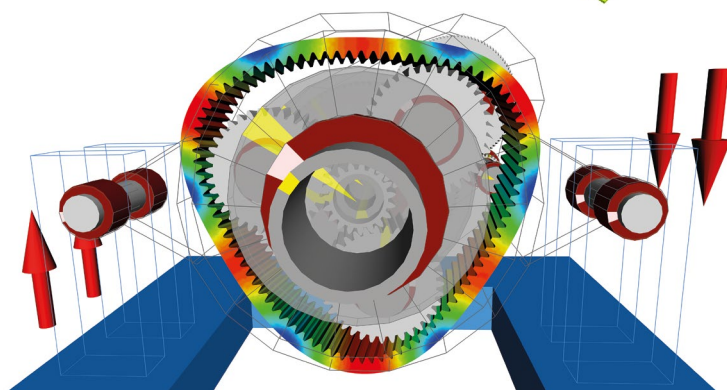
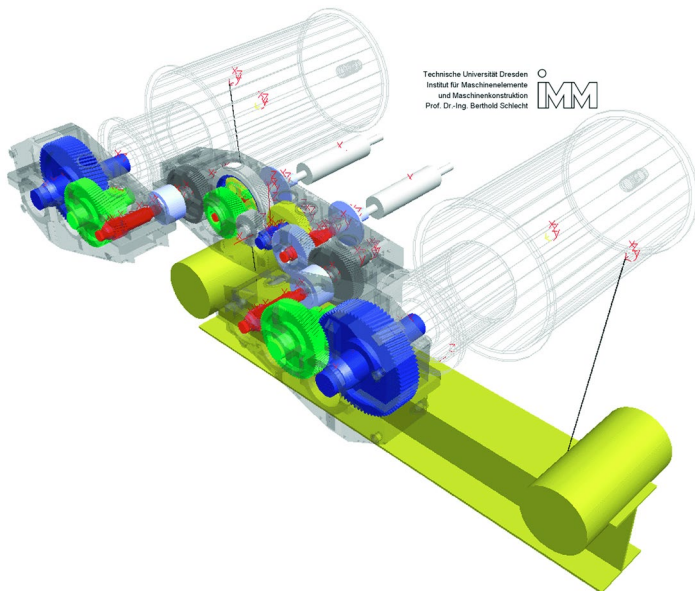
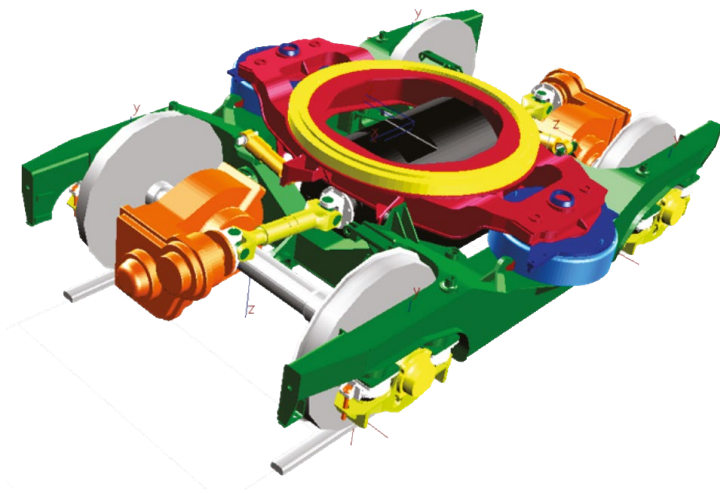
- System simulation of any embedded drivetrain design
- Resonance analysis
- Stochastic and transient response
- Gear whine and rattle
- Optimization
- Stress and durability analysis
- Hardware/software-in-the-loop

## Highlights

- Simulation of any design
- Flexible gear wheels
- Extreme non-linear system behavior, e.g. emergency braking
- Acoustic analyses in the frequency and time domain
- Interfaces to third party software
- Numerous possible levels of fidelity
- Batch jobs and automatic analysis reports

## Features

- Drivetrain specific elements:
  - Universal/Cardan and constant velocity elements
  - Bearings, elastomeric and hydro mounts
  - Gearboxes (gear shift, differential, planetary, etc.)
  - Detailed gear pairs (individual tooth contact)
  - Flywheels, clutches and synchroneshes
- Flexible body generation within SIMPACK
- Importation of flexible bodies from FEM codes
- Non-linear bending
- Easy implementation of user specific code

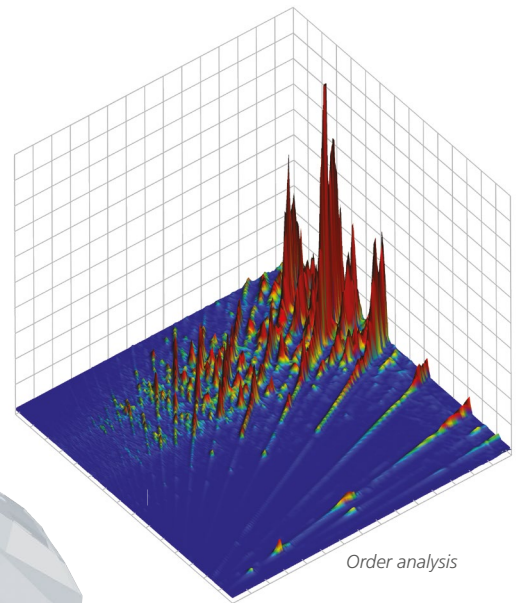
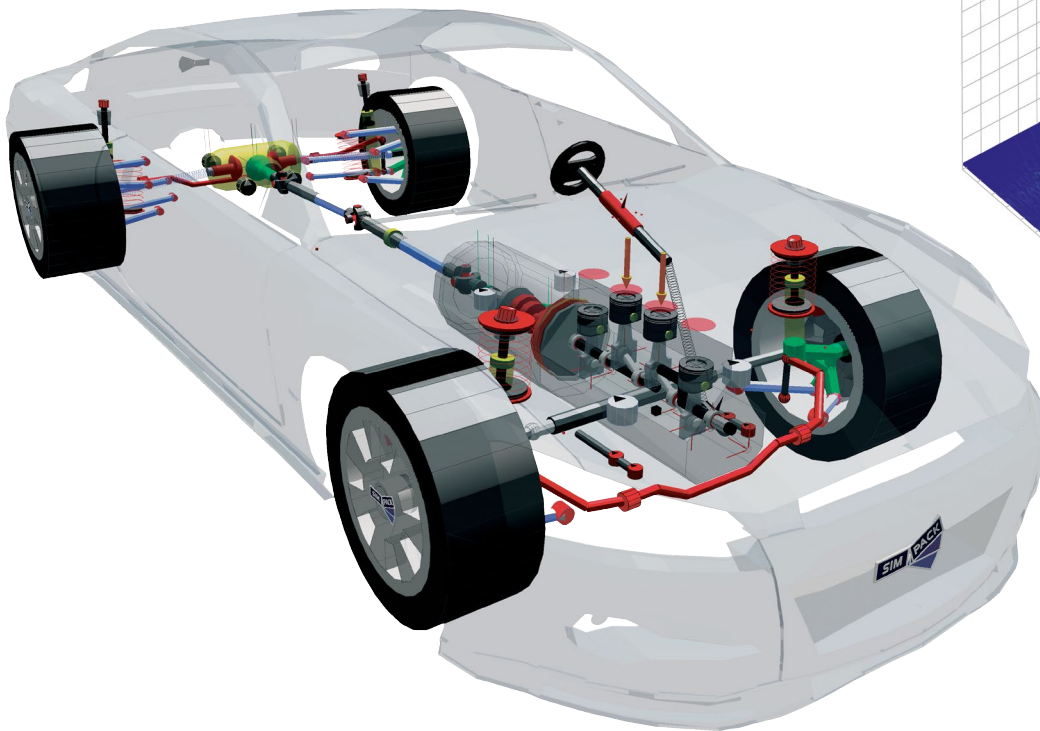
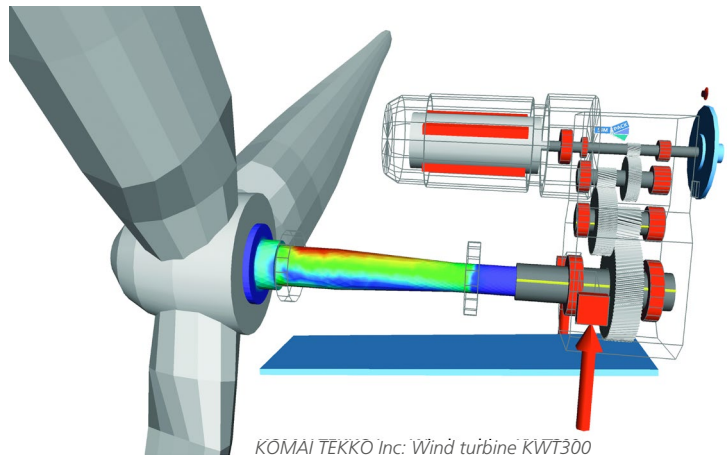


### Interfaces to

- FEM software
- Control software
- CAD software
- CFD software
- Fatigue analysis software
- Aerodynamic codes
- Optimization tools

### Operating Systems

- Windows and Linux.
- See: [www.simpack.com/platforms.html](http://www.simpack.com/platforms.html)



### Our 3DEXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the 3DEXPERIENCE® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 190,000 customers of all sizes in all industries in more than 140 countries. For more information, visit [www.3ds.com](http://www.3ds.com).

