



Accurate · Fast · Robust · Versatile

# SIMPACK RAIL

## Application

### What is SIMPACK?

SIMPACK is a general-purpose multi-body simulation (MBS) software tool which is used to aid the development of any mechanical or mechatronic device, ranging from single components through to complete systems (e.g. trains, vehicles, wind turbines, and high performance Formula 1 engines). All SIMPACK products are 100% compatible.

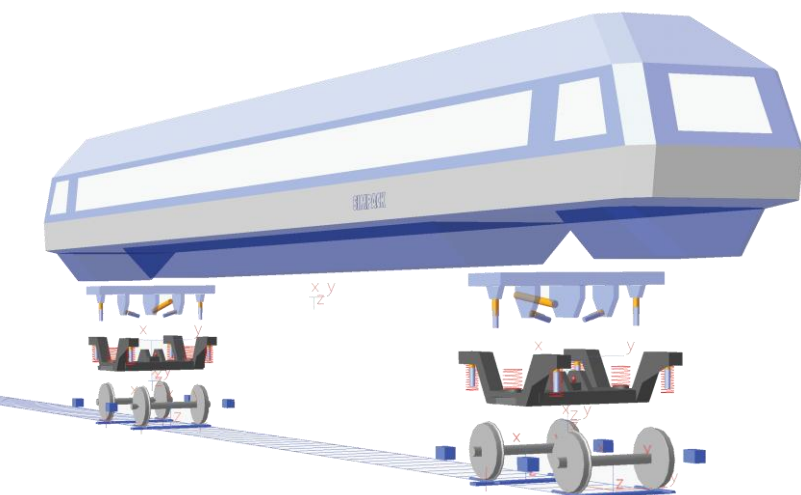
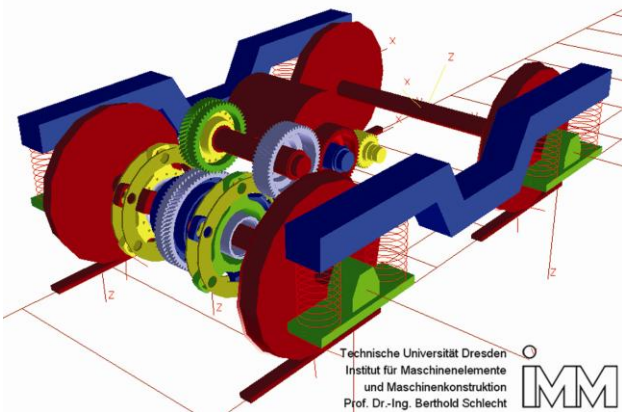
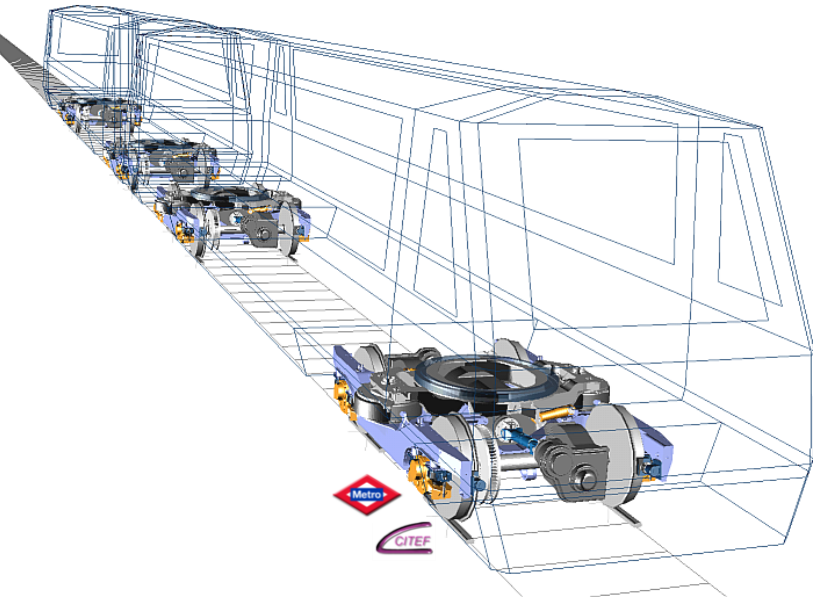
SIMPACK Rail is an add-on module tailored to the specific requirements of the rail sector and the world-wide market leader for rail vehicles MBS simulation.

### Applications:

- Simulation of any vehicle and train design
- Curving, rail-to-wheel forces
- Derailment safety
- Critical speed
- Passenger comfort
- Profile and track optimization, wear and RCF
- Gauging
- Driveline and braking
- Vehicle-track interaction
- Durability
- Switches and crossings design

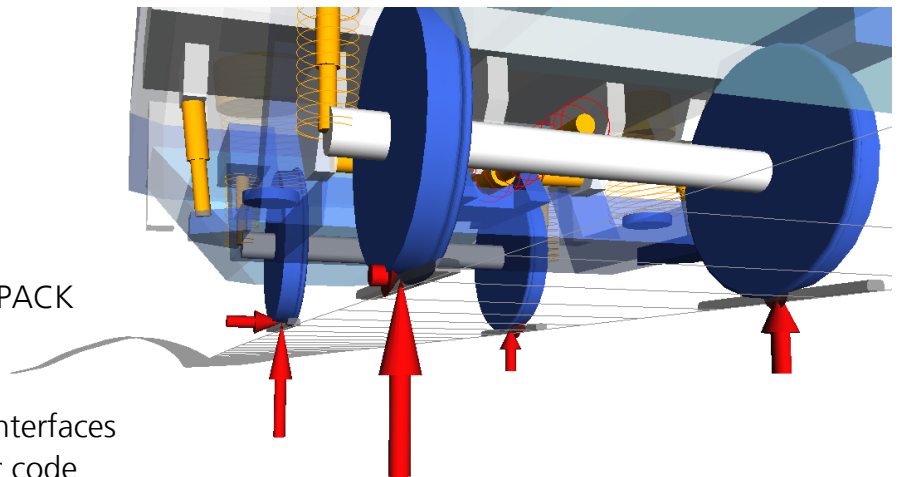
### Highlights:

- Unlimited flexibility
- Easy assembly of multi-car trains from submodels
- Powerful track editor
- Each wheel treated independently
- Scalable detail and complexity
- Batch jobs
- Automatic analysis reports



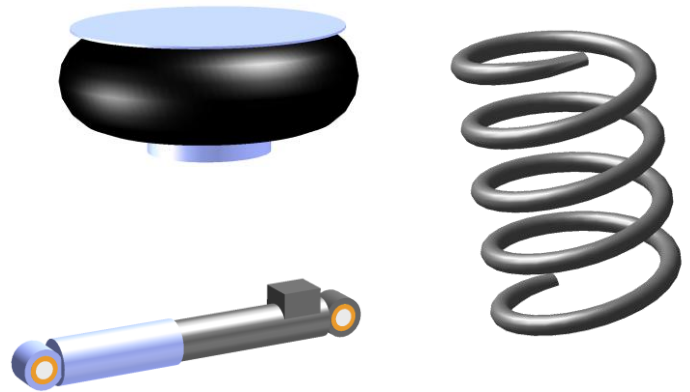
## Features:

- Detailed and accurate (online) rail-to-wheel contact model
- Multiple contact patches per wheel
- Fast and robust solver
- Linear and non-linear analyses
- Flexible body generation within SIMPACK
- Importation of flexible bodies from FEM codes
- Powerful control systems software interfaces
- Easy implementation of user specific code



## Interfaces to:

- FEM software
- Control software
- Fatigue analysis software
- CAD software
- In-house software
- Optimization tools
- Fluid dynamic simulation tools



## Operating systems:

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

## SIMPACK Customer Solution Centers

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