



Accurate Fast Robust Versatile

# SIMPACK AUTOMOTIVE

## 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. wind turbines, vehicles, and high performance Formula 1 engines). All SIMPACK products are 100% compatible.

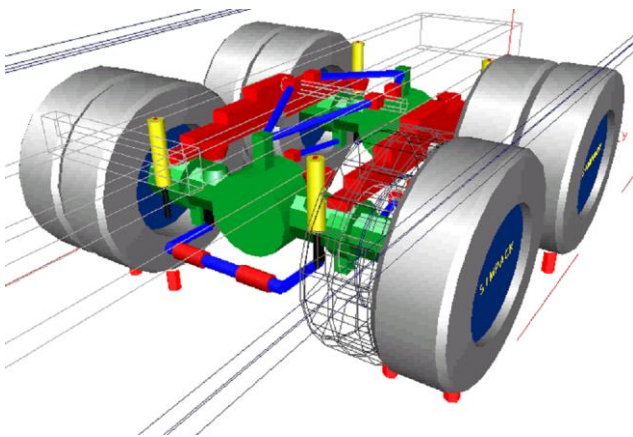
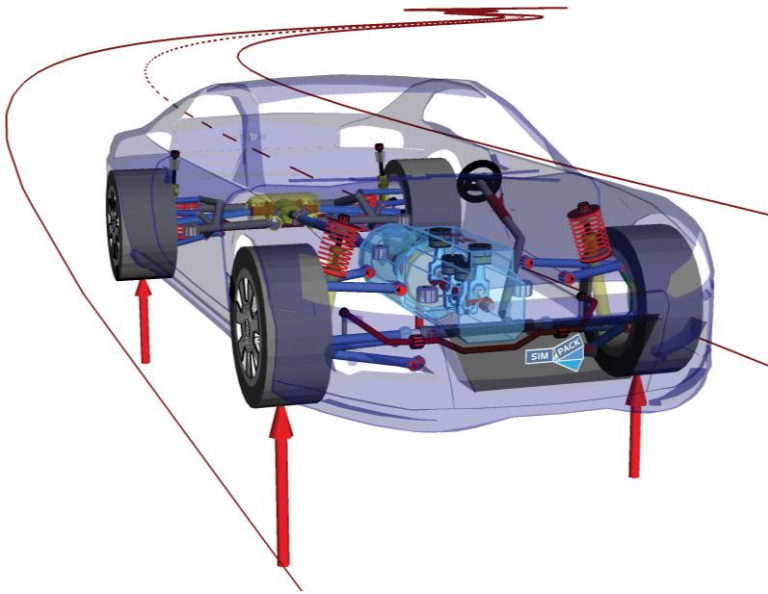
SIMPACK Automotive is an add-on module tailored to the specific requirements of the automotive simulation sector.

### Applications:

- Passenger cars/trucks/busses
- Racing (Formula 1)/Formula Student
- Land machinery
- People movers/motorcycles
- Component/complete system analyses
- Handling/ride/NVH analyses
- SiL, HiL and MiL applications
- Stress/durability
- DOE and optimization

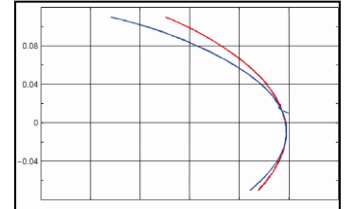
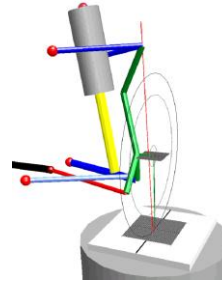
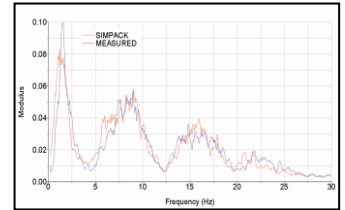
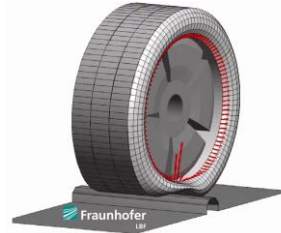
### Highlights:

- Unlimited modeling flexibility
- Extreme non-linear system behavior
- Analyses in the frequency and time domain
- Fully parameterized highly detailed automotive database for all typical suspension/driveline types available
- Scalable detail and complexity
- Batch jobs and automatic report generation
- Interfaces to third party software (CDTire, Delft-Tyre, FTire, TMEasy)



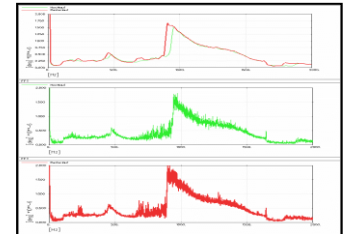
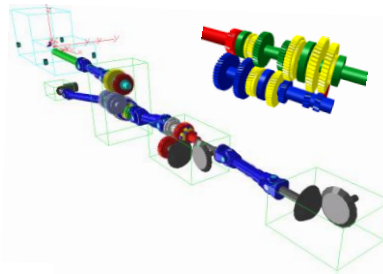
## Features:

- Frequency and amplitude dependent force elements (dynamic bushing/hydromount)
- Stick-slip friction force elements
- Detailed gearwheel force element
- High frequency comfort and durability tire force elements
- Detailed air spring models
- Beam based leaf springs with contact and friction
- Flexible body generation within SIMPACK
- Importation of flexible bodies from FEM codes
- Easy implementation of user specific code



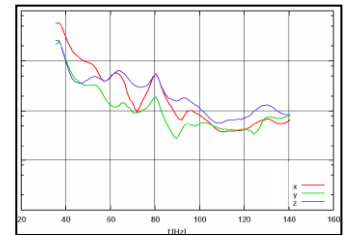
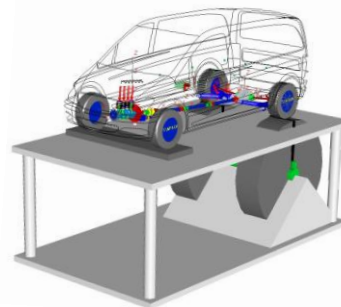
## Interfaces to:

- CAD software
- FEM software
- Control software
- Fluid dynamics software
- Fatigue analysis software
- Optimization tools



## Operating systems:

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



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