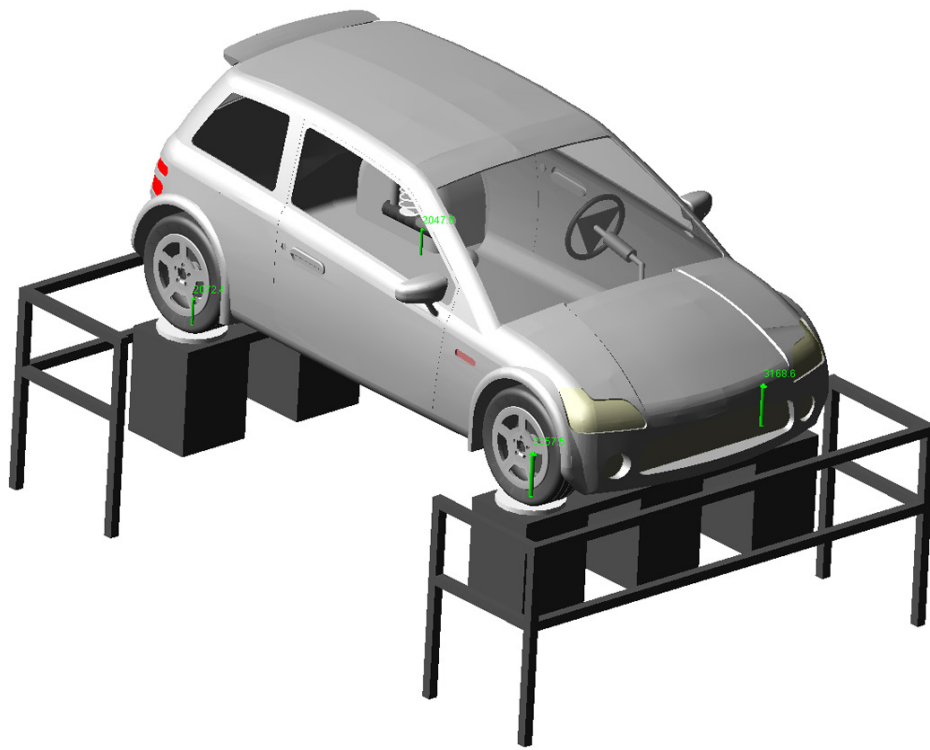


# Adams 2019

## Streamlining Adams Car



## Welcome to Adams 2019!

This release delivers new functionalities and major enhancements in many areas. Key highlights include:

- Fast Flex Body Modeling Approach

A new method for modeling flexible bodies with a lower-fidelity, but faster-solving, approach

- Adams Car Event Sets

Develop/manage a set of events that can be applied to vehicle designs

- Expanded HIL Platform Support

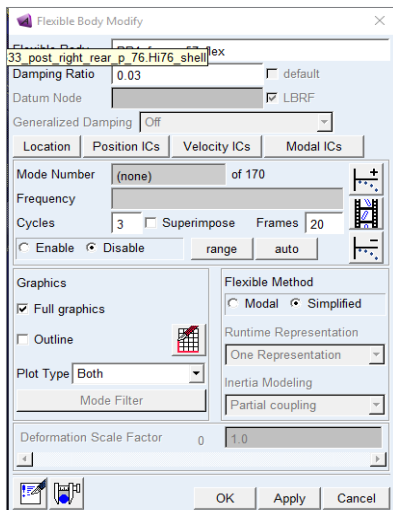
dSPACE Real Time Operating System Support for Adams Real Time

- 4-D Plotting

3-D plotting capabilities with the option to use a 4th dimension

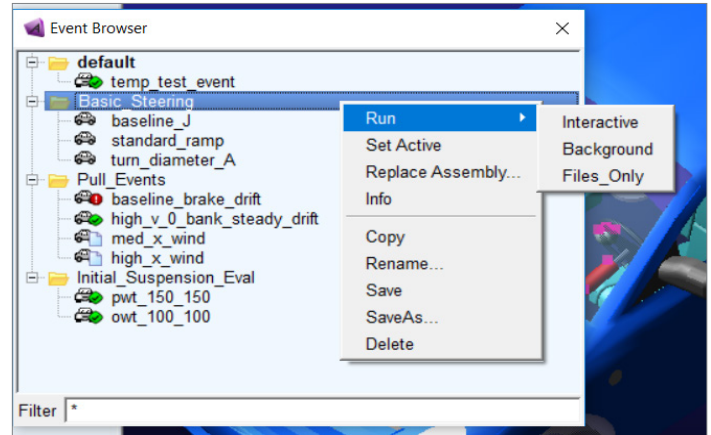
## Fast Flex Body Modeling

With the intent to provide users with the right balance between accuracy and performance a new, faster-solving simplified flex body solution method has been included in Adams 2019. This method retains most flex compliance characteristics but omits some dynamic effects to achieve faster solution times. Solution speedups of 1.5X-4x has been observed in early benchmarking with this simplified approach. The solve time reduction from using the simplified method is more significant the more modes in the flexible body and the more attachments to the flexible body.



## Adams Car Event Sets

Adams Car 2019 introduces a new “event” object and the concept of an “event set.” Event sets are a library of specific event instances. Each event contains all the information needed to re-create and re-run the simulation. This will enable the ability to collect events and run design studies on a set of events, for example. To enable operating against the newly created event and event set objects, Adams 2019 introduces a new Event Browser (similar to the model browser).



## Expanded HIL Support

Adams Solver can now participate in co-simulations performed in the SCALEXIO real time environment from dSPACE. This is achieved via extensions to Adams’ support for the Functional Mockup Interface (FMI). A functional mockup (FMU) unit exported from Adams Controls or Adams Mechatronics within Adams View or Adams Car can now be imported into dSPACE.



## 4-D Plotting

In Adams 2019.0, a new three-dimensional plotting capability has been added. A 3D plot defines a surface in three-dimensional space with X, Y and Z values, where color interpolation is done based on minimum and maximum values of Z. The term “4D Plotting” comes from the ability to add another dimension whereby the surface color can, itself, be an independent parameter and can be plotted based on a different result channel.

