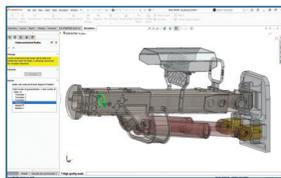


# WHAT'S NEW IN SOLIDWORKS® 2023—SIMULATION

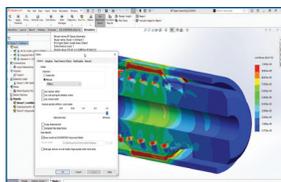


## 1 New Algorithm for Underconstrained Bodies

- Save time and avoid model setup errors by quickly detecting rigid body modes with a brand new, groundbreaking algorithm.
- Take into account contact interactions and bolt connectors for an improved, more precise rigid body detection.

### Benefits

Get simulation results faster by preventing setup errors before running the simulation.

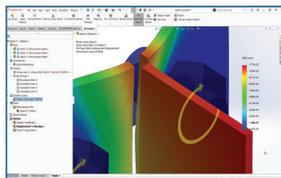


## 2 Penalty Stiffness Control for Contact

- Get convergence easier and faster by specifying the contact penalty stiffness with the new contact penalty stiffness scale factor.
- Obtain an approximate solution faster by relaxing the contact penalty stiffness scale factor in linear static studies.

### Benefits

Save time by obtaining faster convergence when relaxing the contact penalty stiffness scale factor.

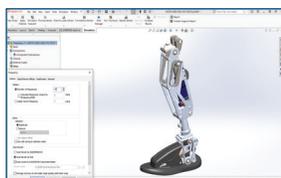


## 3 Bonding Between Nonfacing Surfaces

- Get better accuracy with an improved surface-to-surface bonding algorithm.
- Enforce bonding interactions for faces that are not facing each other and have no projection area between them.

### Benefits

Improve accuracy by obtaining results from interactions of faces that are not facing each other.

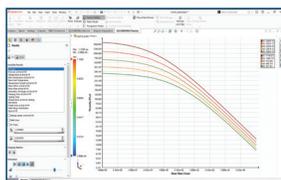


## 4 Solver Improvements

- Expedite solution time with function-based stiffness data communication replacing file-based processing.
- Take advantage of function-based processing for frequency, buckling, and linear static studies which include node-to-surface interactions and virtual wall definitions.

### Benefits

Solve frequency and buckling studies faster with solver improvements.



## 5 Plastics Material Database and Report Improvements

- Improve simulation accuracy by using new and updated material grades with the latest property values from manufacturers while obsolete grades have been removed.
- Browse materials more easily with the new enhanced material database manager.
- Create richer documents easily with enhanced summary and report capabilities.

### Benefits

Improve the accuracy of plastics injection simulation with up-to-date material data and enhanced usability.