

## NEW FEATURES

<b>Lattice Visualization and Export</b>	Generate optimized Lattice and mixed Solid and Lattice structures with Inspire's new Lattice Visualization, Optimization, and .stl export.
<b>Overhang Shape Controls</b>	Design with Additive Manufacturing in mind with Overhang shape controls allowing users to eliminate overhangs to create a more self-supporting structure. This helps minimize the need to add support structures during the printing process.
<b>PolyNURBS Fit</b>	Create full CAD and manufacturing ready geometries post simulation with the PolyNURBS Fit tool that automatically fits a PolyNURBS to an optimized shape.
<b>New Load Case Table</b>	The load cases table has been redesigned so that you can easily view all loads and select the load cases to which they apply.
<b>Import and Export Loads and Supports</b>	In addition, you can now use the Load Cases table to import and export loads and supports from a .csv or .xls file using a fixed format.
<b>Additional Creasing Option for PolyNURBS Sharpen</b>	There are now four levels of sharpening available in the PolyNURBS Sharpen tool: low sharpening, medium sharpening, high sharpening, and no sharpening.
<b>Face Insert for PolyNURBS</b>	You can now create a face inset by holding down the Shift key when you click a PolyNURBS face.
<b>Friction for Rigid Joints</b>	Forces that arise from frictional effects can now be included in motion analysis for joints. When the joint behavior has been set to Rigid in the Property Editor, you can enable friction for the following joint types: Pin, Sliding Pin, Hinge, Cylindrical, Ball and Socket, and Translational. You can specify the coefficients of friction (static and dynamic) and include other model parameters which allow you to model frictional drag and stiction effects.

## ENHANCEMENTS

<b>Clearance Parameter for Contacts</b>	A new Clearance parameter has been added to the Contacts table. It allows you to define when a contact is considered in cases where there is a slight separation between parts in contact. This parameter only applies when the Sliding with Separation option is selected in the Run Optimization window..
<b>Enhancements to the Spot Welds Legend</b>	The number of surfaces in a weld is now shown with different colors in the spot welds legend, and all welds with that number of surfaces can be hidden or displayed from the legend.
<b>Improved Profile Editor</b>	Users can now preview the built-in actuator and motor profiles using the Profile Editor. The profile parameters that govern the shape can also be modified graphically using handles and multiple data points can be moved using box selection and by clicking and dragging. In addition a new Convert to Table button makes it easy to tweak an existing profile shape or save the data to a .csv file for downstream modification (e.g. concatenation).
<b>Target Mass for Gauge Optimization</b>	An option to specify a target mass has been added for gauge optimization.

<b>Translational Joints for Actuators</b>	<p>The Coaxial Joint property for actuators has now been expanded to include translational joints (in addition to the previously available cylindrical joints).</p>
<b>Plots for Dissipated Energy</b>	<p>Additional plot components, Energy and Energy Rate, are now available in the plot context menu. They can be used to measure dissipated energy in damper elements for coil and torsion spring dampers. These outputs can give you insight about which dampers are doing the most work or where energy loss (due to damping effects) may occur during transient motion analysis.</p>
<b>Select Model Units for Export</b>	<p>Clicking the Export button on the Run Analysis, Run Optimization, Run Part Analysis and Run Part Optimization windows now prompts you to select a unit system for export.</p>
<b>Export CAD at the Part Level</b>	<p>A new Body Position preference has been added that allows you to export CAD at the part level without an assembly. (When using the regular Save As option, parts are saved in an assembly structure.)</p>
<b>Evolve File Updates</b>	<p>Evolve .evo files can now be read into Inspire.</p>