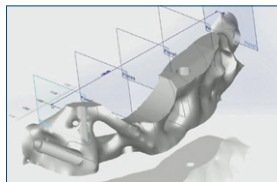# DS SOLIDWORKS

3DEXPERIENCE®

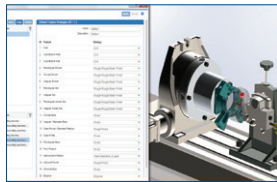## WHAT'S NEW IN SOLIDWORKS 2019—DESIGN TO MANUFACTURE

1 MESH MODELING IMPROVEMENTS SPEED REVERSE ENGINEERING, TOPOLOGY OPTIMIZATION AND 3D PRINTING

- Easily create complex textures by converting 2D appearances into real 3D geometry
- Use mesh files like they are solids using the new Segment Mesh
- Automatically create 2D sketches at intersections of geometry and a plane with the slicing command

Benefits

Increased capabilities for mesh geometry, streamlining reverse engineering and topology optimization.
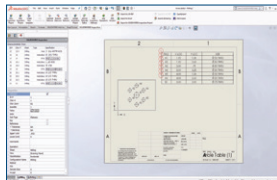
2 SMARTER MACHINING WITH SOLIDWORKS CAM/ MACHINIST

- Corner Slow Down and Arc Feedrate allow slowdown when approaching sharp corners and arcs
- Create machine-specific machining strategies
- Tooling improved with support for tapered shanks and more parameters

Benefits

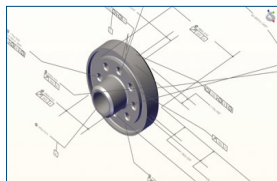Enhanced user control and automation for each operation and machining strategy.

3 INCREASED PRODUCTIVITY AND FLEXIBILITY WITH SOLIDWORKS INSPECTION

- Improved Bill of Characteristics with new grid layout and group/ungroup
- Additional extraction options to include hole tables for use on complex parts
- Integration with SOLIDWORKS® PDM to manage and organize inspection projects and deliverables

Benefits

Increased productivity when creating quality control documentation.
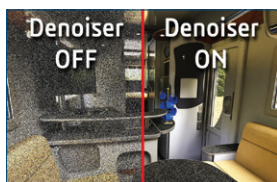
4 IMPROVED WORKFLOWS WITH SOLIDWORKS COMPOSER FOR TECHNICAL DOCUMENTATION

- SOLIDWORKS PDM integration enables access to PDM functionality directly from the ribbon within SOLIDWORKS Composer
- Import Product Manufacturing Information (PMI) data directly from SOLIDWORKS models into SOLIDWORKS Composer
- New icons, new commands and support for five new languages

Benefits

Improved workflow integration with SOLIDWORKS, productivity improvements and enhanced user experience.

5 VISUALIZATION AND RENDERING—MAKING THE DIGITAL WORLD MORE REAL... FASTER

- AI (Artificial Intelligence) Denoiser—Uses AI to decipher and eliminate noise from your renders
- Integrated Physics Engine & Vehicle Driving Simulator for faster scene setup and real-time design review
- Enhanced Decal features and support for Video Decals

Benefits

Set up your projects and instantly render them 10x faster with real-world physics and advanced measured materials.
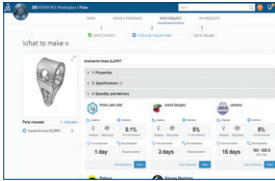
DS DASSAULT SYSTEMES

6 CONFIGURE AND RENDER PRODUCTS ON THE FLY AND ONLINE WITH SOLIDWORKS SELL

- Click to add SOLIDWORKS designs to a SOLIDWORKS Sell cloud-based configurator
- Use on any device to share concepts and configurations of designs quickly
- Use Augmented Reality (AR) to show products in their actual environment

Benefits

Unlock the value of your design data and leverage it with your teams and your customers.
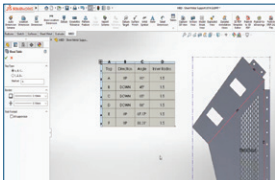
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7 FROM CAD MODEL TO REAL PARTS IN RECORD TIME WITH 3DEXPERIENCE MARKETPLACE|MAKE

- On-demand manufacturing across all manufacturing processes
- Place orders, track communications and collaborate with leading manufacturers worldwide
- Seamless integration between SOLIDWORKS and your favorite manufacturers

Benefits

Streamline interactions with manufacturers such as quoting and ordering parts.
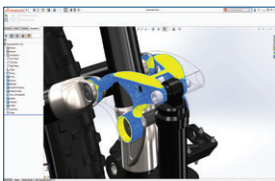
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8 ENHANCED MBD (MODEL BASED DEFINITION) CAPABILITIES FOR FASTER 3D ANNOTATION OF MODELS

- DimXpert renamed to **MBD Dimension** and now available in Assembly mode
- Create bend tables, bend notes and flat views automatically for sheet metal parts
- 3D annotations passed to derived and mirrored parts
- Enhanced security controls for 3D PDF outputs

Benefits

Speed up downstream manufacturing with more intuitive and actionable 3D annotations.
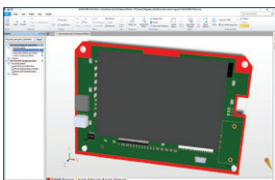
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9 MORE POWERFUL SIMULATION CAPABILITIES

- Topology Optimization with Stress and Frequency constraints/goals for optimum parts
- Enhanced non-linear pin connector for accurate pin and clevis analysis
- Easy data reuse with drag-and-drop connectors/contacts into Non-Linear Dynamic studies

Benefits

Set up and perform complex simulation studies easier and with greater accuracy.

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10 SOLIDWORKS ELECTRICAL AND PCB IMPROVED FOR FASTER MECHATRONIC DESIGN

- Drive mechanically-oriented PCB placement barriers for SOLIDWORKS PCB
- Auto-generate flattened route drawings and related tables in SOLIDWORKS Electrical
- Use splices from SOLIDWORKS Electrical schematics utilizing passing circuit symbols in 3D

Benefits

Improved capabilities for designing mechatronics products with SOLIDWORKS.

Our **3D**EXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the **3D**EXPERIENCE® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 220,000 customers of all sizes in all industries in more than 140 countries. For more information, visit **www.3ds.com**.

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