

Altair releases HyperWorks 2019

The latest version of Altair's flagship simulation platform, HyperWorks, unifies design, engineering and manufacturing communities for faster than ever development cycles.

Global product development, high-performance computing and data intelligence solutions provider, Altair, has announced the release of Altair HyperWorks™ 2019, the latest version of its simulation and AI-driven product development platform. The new release expands on the number of solutions available for designers and engineers under a single, open-architecture platform, to speed decision-making and time to market. User experience advancements and intuitive workflows empower expert and citizen analysts to streamline product innovation.

"We want to help our customers explore more ideas, better understand their designs, and improve profitability," said James Scapa, Altair's chief executive officer and founder. "To achieve this, our development focus for HyperWorks 2019 was to increase solve speeds and functionality across our solutions for every stage of product development with optimisation and multi-physics workflows for all manufacturing methods."

Highlights of this software release include:

- **Fast simulation of complex assemblies:** Altair SimSolid™ makes designers and engineers more productive by performing structural analysis on original, unsimplified CAD assemblies in seconds to minutes. SimSolid can analyse complex parts and large assemblies that would take hours or days using traditional structural simulation tools.
- **Easy-to-learn fatigue life prediction:** Altair HyperLife™ enables customers to quickly understand potential durability issues through an easy-to-learn solution for fatigue life under static, transient and vibrational loading. The intuitive user experience enables test engineers to perform simulations with little or no training. HyperLife helps customers to confidently predict product durability in hours, complementing physical testing, which can take months.
- **Efficient workflows for multi-physics:** Altair SimLab™ is an intuitive workflow platform for simulating multi-physics problems. Automatic feature and part recognition can make simulation cycles more than five times faster. Design exploration is easier with synching to popular CAD tools. The multi-physics workflows feature deeply embedded solvers; including statics, dynamics, heat transfer, fluid flow, electromagnetics analysis, fluid-structure interaction, and electromagnetic-thermal coupling.
- **Superior high-fidelity modelling:** HyperWorks 2019 includes the most robust Altair HyperMesh™ version yet. New features enable the generation of the largest, most complex finite element models. The model build and assembly tools in HyperMesh make managing large, complex assemblies easier than ever. This allows CAE to keep pace with design changes by rapidly swapping new parts and assemblies into existing models, managing multiple configurations, mesh variants and part instances. The direct mid-mesh generation makes it possible to create shell meshes straight from solid geometry of complex castings and injection-moulded parts.
- **Enhanced user experience for fast concept modelling:** The HyperWorks platform already includes Altair Inspire™,



James Scapa, Altair's chief executive officer.

Altair Activate™ and SimLab delivering class-leading solutions with intuitive and consistent user-interfaces. In this release Altair HyperWorks X is included with a new set of workflows for geometry creation, editing, morphing and meshing, all employing this same user experience. The easy-to-learn mesh morphing features of HyperWorks X will bring efficiency to teams working on simulation models early in product development. These workflows enable concept level changes to be made directly on an existing FEA model bypassing CAD generation and accelerating decision-making.

- **Expanded non-linear solver functionality:** Analysis with Altair OptiStruct™ is increasing at companies performing stiffness, strength and fatigue-life simulations; fuelled by the significant process improvement it provides. The single-model, multi-attribute workflow enabled by OptiStruct delivers time and cost savings. Design decisions can be made faster by engineers performing linear, non-linear, and durability analyses – using one optimisation-ready model.
 - **Continued generative design leadership:** Altair has been the industry leader for generative design for more than two decades. Altair HyperWorks optimises structures, mechanisms, composites, and additive manufactured parts. Regardless of how products are produced, HyperWorks can enhance creativity by proposing designs that are as manufacturable as they are efficient and innovative.
- "HyperWorks 2019 enhances the user experience for experts and part-time analysts," explained Scapa. "This release includes a new set of workflows for our flagship Altair HyperMesh product, making advanced analysis capabilities more accessible. In addition, the new Altair HyperLife product enables test engineers to perform fatigue simulations with minimal training." □

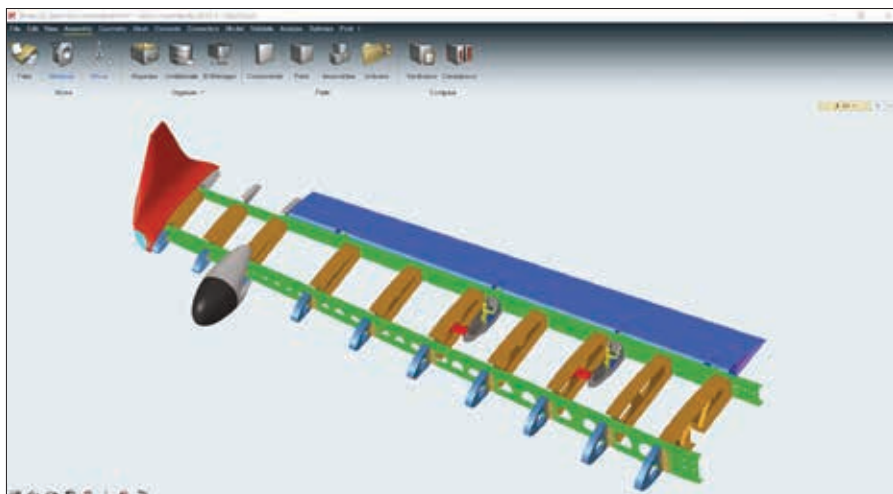


Figure 1: Designers, engineers and CAE specialists can now work within a single intuitive and consistent user-experience.