



Dassault Systèmes Delivers New, Innovative Realistic Simulation Technology in SIMULIA's Abaqus 6.11 Release

Nonlinear Structural Optimization, Electromagnetic Analysis, and GPU-Support Highlight Latest Release of Abaqus

This addendum is associated with the 18-May-2011 press release from Dassault Systèmes.

Abaqus 6.11 delivers on SIMULIA's strategic commitment to provide scalable, high-quality realistic simulation solutions with new capabilities and more than 100 customer-requested enhancements. SIMULIA customers in a wide range of industries – including aerospace, automotive, consumer packaged goods, energy, and life sciences – are using Abaqus to explore the real-world physical behavior of products and materials, in order to improve performance, reliability and safety, while reducing development time and costs.

Key Features of Abaqus 6.11:

Multiphysics:

- Electromagnetics solver for problems requiring time-harmonic eddy current analysis, such as the hardening of a bearing surface due to induction
- Smoothed particle hydrodynamics (SPH) capability for modeling violent free-surface flows, such as fluid sloshing
- Ability to define a spatially varying velocity when specifying inflow and outflow conditions and wall boundary conditions for a fluid dynamic analysis

Modeling & Visualization:

- Interactive mapping capability for importing and applying spatially varying parameter values based on an external data source, such as pressure loads from a computational fluid dynamics (CFD) application
- Capabilities for more realistic and efficient large-scale fastener modeling for applications such as rivets on an aircraft fuselage
- Ability to display stress variation on beam sections, such as structural members of an offshore platform subjected to wave loading
- Additional options for freebody force and moment output including the ability to display output at multiple sections and history plots

Performance:

- Abaqus/Standard can be executed in parallel on shared memory computers equipped with compute-capable graphics processing unit (GPU) cards
- Scalable thread-parallel execution capability of the parallel AMS eigensolver, for solving larger symmetric eigenvalue problems faster
- Parallel cavity radiation scheme for modeling heat transfer effects due to radiation in enclosures, such as heat transfer in an engine exhaust



- Parallel frequency response solver to support shared memory parallel (SMP) with up to 24-cores, providing class leading performance

Add-ons:

- Abaqus Topology Optimization Module (ATOM) provides topology and shape optimization capabilities that accounts for material nonlinearity and contact
- Enhanced CATIA V5 Bidirectional Associative Interface (AI) provides seamless parameter updating for rapid design analysis iterations

For additional product information, visit: www.simulia.com/products/unified_fea.

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About SIMULIA

SIMULIA is the Dassault Systèmes brand that delivers a scalable portfolio of Realistic Simulation solutions including the Abaqus product suite for Unified Finite Element Analysis, multiphysics solutions for insight into challenging engineering problems, and SIMULIA SLM for managing simulation data, processes, and intellectual property. By building on established technology, respected quality, and superior customer service, SIMULIA makes realistic simulation an integral business practice that improves product performance, reduces physical prototypes, and drives innovation. Headquartered in Providence, RI, USA, SIMULIA provides sales, services, and support through a global network of regional offices and distributors. For more information, visit www.simulia.com.

About Dassault Systèmes

As a world leader in 3D and Product Lifecycle Management (PLM) solutions, Dassault Systèmes brings value to more than 130,000 customers in 80 countries. A pioneer in the 3D software market since 1981, Dassault Systèmes applications provide a 3D vision of the entire lifecycle of products from conception to maintenance to recycling. The Dassault Systèmes portfolio consists of CATIA for designing the virtual product - DELMIA for virtual production - SIMULIA for virtual testing - ENOVIA for global collaborative lifecycle management, EXALEAD for search-based applications- SolidWorks for 3D mechanical design and 3DVIA for online 3D lifelike experiences. For more information, visit <http://www.3ds.com>.

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