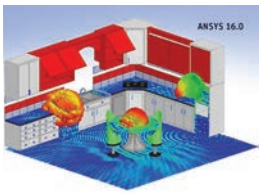
Simulation in the News

ANSYS LAUNCHES RELEASE 16.0

Desktop Engineering
deskeng.com, January 2015



ANSYS 16.0 delivers major advancements across the company's entire portfolio, including structures, fluids, electronics and systems engineering solutions — providing engineers with the ability to validate complete virtual prototypes. This release introduces an electronics desktop, provides users with the opportunity to create 3-D components and integrate them into larger electronics assemblies, reduces fluid dynamic simulation time for complex models by up to 40 percent, and launches ANSYS AIM, an innovative, immersive simulation environment that lowers the barrier to entry for multiphysics simulations.

"Validating prototypes on the computer using ANSYS simulation software, in addition to physical tests, drives us to higher levels of innovation while getting our products to market faster and more cost effectively."

– Robert Terhune, Mechanical Engineer, 4moms

ANSYS RELEASES NEW VERSION OF SPACECLAIM

Develop 3D
develop3d.com, January 2015

The newly released version of ANSYS SpaceClaim enables engineers to manipulate product geometries more easily than ever, as well as to print fast and flexibly in 3-D. Additional improvements include imprint and wrap tools for easier simulation edits, clean and detection functionality, and improved integration with ANSYS Workbench.

MEET THE 2015 ANSYS HALL OF FAME WINNERS

Engineering.com
engineering.com, January 2015

The five ANSYS Hall of Fame winners for 2015 include a company developing new spinal instruments to reduce the risks of scoliosis surgery and a university that is exploring how leatherback turtles might survive global climate change. The contest, which highlights some of the most complex scientific and engineering challenges, gives ANSYS users the opportunity to showcase their simulation work by producing eye-grabbing images and animations. For the second year in a row, submissions were divided into two categories — corporate and academic — and allowed ANSYS to select multiple "best-in-class" winners from each category.

▲ Simulation of a spherical valve for a hydroelectric plant inlet. ANDRITZ Hydro, whose entry was named to the Hall of Fame, reduced the weight of the valve inlet with the help of simulation.

SCALING ANSYS HPC IN THE CLOUD

insideHPC
insidehpc.com, October 2014

A newly published report by Techila Technologies and Cargotec's MacGregor business takes a look at how ANSYS simulation users can reduce the total cost of high-performance computing ownership by integrating cloud services with IT. Because MacGregor's marine structural components are custom-designed for each specific application and must be simulated quickly, the role of HPC is critical.

ANSYS BOOSTS COMPUTATIONAL FLUID DYNAMICS OFFERING WITH ACQUISITION

Financial News
financial-news.co.uk, February 2015

ANSYS has acquired the assets of Newmerical Technologies International (NTI), a premier developer of in-flight icing simulation software and associated design, testing and certification services. NTI's suite of state-of-the-art specialized software can solve problems in aerodynamics, in-flight icing, heat transfer, fluid–structure interaction and wind engineering.

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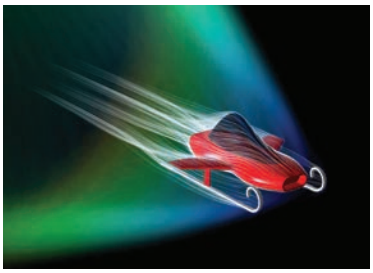
SANTA'S SLEIGH UPGRADED WITH COMPUTATIONAL FLUID DYNAMICS SIMULATION

3D CAD World
3dcadworld.com, December 2014

ANSYS celebrated the holiday season by attempting to improve the deer-energy efficiency of Santa Claus's sleigh and thus protect the Christmas figure from the harsh elements. CFD simulation revealed that the drag on Santa's traditional sleigh was very high. The newly designed sleigh, which resembles a small aircraft, reduces drag by 90 percent and now, hypothetically, can reach even supersonic speeds.



▲ Santa Claus's new sleigh, designed with simulation, is more aerodynamic and built to handle supersonic speeds.

NORTHROP GRUMMAN TEAMED WITH ANSYS ON BLACK HAWK

Avionics Today
aviationtoday.com, October 2014

Northrop Grumman is developing the new Black Hawk cockpit display system using ANSYS simulation. ANSYS SCADE Suite and Display are being used to upgrade to the digitized UH-60V cockpit and help meet new safety standards.

CFD SIMULATIONS ARE SAVING INFANTS FROM DEADLY HEART DEFECTS

Engineering.com
engineering.com, December 2014

Approximately 1,000 children are born in the United States each year with a heart condition known as hypoplastic left heart syndrome, which is characterized by underdevelopment of the left side of the heart; the diagnosis affects newborns worldwide. Three surgeries are required within a child's first two to three years to ensure his or her health and survival. Doctors now can gain more information to select optimal surgical options by testing scenarios using ANSYS Fluent CFD simulations. By employing simulation, medical professionals save lives and cut down on unnecessary or excessively dangerous surgeries on very young patients.

▲ ANSYS simulation of velocity magnitude at a total cavopulmonary connection (TCPC) surgery site
Courtesy Politecnico di Milano.

COMPUTERS IN THE SKY: THE DESIGN OF NEXT-GEN AIRCRAFT

Aerospace Manufacturing and Design
onlineamd.com, November 2014

Robert Harwood, director of aerospace and defense at ANSYS, breaks down the three main considerations for designing next-generation aircraft: economic efficiency, environmental impact and improved passenger experience. A suitably next-generation digital design process, he writes, is necessary for the work but has not been fully realized. The article features Boeing, Airbus, Lockheed Martin and Northrop Grumman advancements.

SIMULATION HELPS MOTORBIKE RACER BREAK DOWNHILL SPEED RECORD

The Engineer
theengineer.co.uk, November 2014

▲ The team from Sheffield Hallam University's Centre for Sports Engineering Research with Guy Martin (center)
Courtesy Channel 4.

A team from Sheffield Hallam University used ANSYS CFD technology to design a gravity-powered sled that broke the world record for downhill speed. The vehicle was created around — and built to accommodate — a virtual prototype of Guy Martin. Martin, a mechanic, motorbike racer and TV presenter, then raced the vehicle downhill in France at a new world record speed of 85.61 mph, breaking his own 2013 world record of 83.49 mph.

HOW GERMS TRAVEL: THE SNEEZE-ON-A-PLANE EDITION

Popular Science
popsci.com, October 2014

A simulation generated by the FAA's Center of Excellence at Purdue University used ANSYS fluid dynamics solutions to demonstrate a passenger sneezing in a crowded airplane and dispersing influenza particles throughout the cabin. The Federal Aviation Administration has been interested in determining how flu particles spread on airplanes since the outbreak of SARS in 2002. The simulation shows that airborne diseases can be spread quickly in flight.

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