ATA news

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ATA Engineering Announces 2020 Training Class Schedule

DETAILS INSIDE

Siemens Releases Simcenter Femap 2020.I

The newly released Femap 2020.I continues the biannual schedule of feature releases each spring and fall. Femap 2020.I is available to download from GTAC now.

As always, this release brings a number of exciting enhancements to UI and Visualization, pre- and post-processing, meshing, and solver support. Read ATA's newest article for a closer look at the new features, and join us January 8th for our webinar What's New in Femap 2020.I.

Femap 2020.I brings a re-creation of all icons—over 1600—as new vector images that will allow Femap to support high-resolution displays. In addition, some element result types will use new Output Vector IDs to allow for support of new output types and elements in the future.

In other areas, Siemens' Synchronous Technology is introduced for Feature Editing, and blend removal is improved. Workflows are improved for a number of commands, a new mesh interference check is introduced, and loads and constraints can now be copied to multiple sets simultaneously.

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ATA Engineering Announces 2020 Training Class Schedule

ATA is excited to share the details of our 2020 training class schedule. Next year, the following courses will be offered in our San Diego, Denver, and Washington DC offices:

- Intro to Femap
- Intro to FEA
- Intro to Dynamic Analysis
- Advanced Dynamic Analysis

The Nastran courses are available with either Femap or Simcenter 3D for pre- and post-processing. In addition, our Simcenter 3D Response Dynamics course will be held twice in San Diego, and Multi-Step Nonlinear with Solutions 401 and 402 will be offered a total of three times.

Additional courses, including Advanced Femap, Intro to DMAP, Superelements, Optimization, and more, are available on demand, and we're always happy to discuss custom and on-site class options.

ATA Engineering is proud to develop the official Simcenter Nastran training materials and has been recognized as the preferred North American provider of Simcenter Nastran Training.

View our full training class schedule.

Calendar of Events

UPCOMING TRAINING CLASSES

ATA provides comprehensive training in the use of Femap, Simcenter 3D (formerly NX CAE), and Simcenter Nastran (formerly NX Nastran). Upcoming training classes are shown below. Please visit our website to sign up for these classes or request a custom class.

FEMAP

FEB 04 **Introduction to Femap**

SIMCENTER NASTRAN WITH FEMAP

FEB 11 **Introduction to Finite Element Analysis**

MAR 16 **Introduction to Dynamic Analysis**

MAR 19 **Advanced Dynamic Analysis**

SIMCENTER NASTRAN WITH SIMCENTER 3D

FEB 11 **Introduction to Finite Element Analysis**

MAR 03 **Multi-Step Nonlinear**

MAR 16 **Introduction to Dynamic Analysis**

MAR 19 **Advanced Dynamic Analysis**

SIMCENTER 3D

APR 07 **Response Dynamics**

UPCOMING SEMINARS AND WEBINARS

DEC 11 **Checking Element Quality in Femap**
Checking Element Quality in Simcenter 3D

DEC 12 **What's New in STAR-CCM+ 2019.3**

DEC 18 **Multiphase Modeling in STAR-CCM+**

JAN 08 **What's New in Femap 2020.1**

ATA also provides a host of free training resources including tutorials, videos, and whitepapers.

Tips and Tricks

NX: INTRODUCING NX LAUNCHER

In the age of Continuous Release, each NX installation is mapped to the Siemens NX folder of the Start menu, and the shortcut for NX or Simcenter 3D corresponds to the most recent version installed, not necessarily the most recent release. This video shares how to install and set up NX Launcher, which allows users to specify versions, applications, and even environments to help manage multiple software installations.
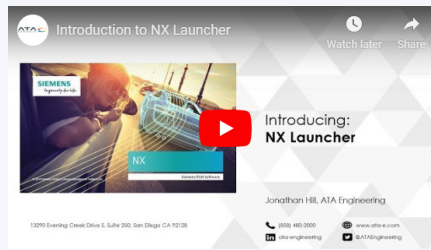
FEMAP: ALT CLICK

This video shows how Alt + right-click can be used while the Select Toolbar is active to bring up the Quick Access Menu, offering a way to quickly change selection options and tooltip settings on the fly without going back through the toolbar menus.

STAR-CCM+: GEOMETRY PART FROM EXTERNALLY GENERATED MESH

Have you worked with an externally generated mesh from third-party software and wanted to remesh within STAR-CCM+? You can export a number of CAD formats from STAR-CCM+, including STAR-CD pro-STAR Surface Mesh (*.dbs), which can be imported into a new session of STAR-CCM+ as a geometry part. First, expand the "Representations" node of the Simulation Tree, right-click "Volume Mesh," and select "Extract Boundary Surface…" This will create an "Extracted Surface" node. Right-click "Extracted Surface" and select "Export Surface…" From there you can export into the format of your choosing. You can then import it as a geometry part in a new session of STAR-CCM+, which makes the powerful meshing capabilities of STAR-CCM+ available.

New Resources

Presentation: FEA Model Checking Procedures

Model checks, including pre-meshing checks, solver checks, and post-processing reviews, are an important part of verifying the accuracy of a finite element analysis. In this comprehensive presentation, we discuss pre-processor checks such as free edges, coincident nodes and elements, shell element normal, material directions, element offsets, and material property and mass checks. We also consider how to use unit gravity, free-free modes, fixed modes, and unit thermal soak analyses to evaluate element quality, weight, grounding, restraint forces, rigid body modes, and modal effective mass fractions. Finally, the presentation shares pre-meshing philosophies, model documentation, and practical project recommendations and best practices.

On-Demand Webinar: What's New in NX and Simcenter 3D 2019.2

Revisit this summer's release of NX and Simcenter 3D 2019.2 with demonstrations of many popular features and enhancements.

On-Demand Webinar: Recovering Stress Data with Simcenter Nastran

Post-processors like Femap and Simcenter 3D allow users to quickly flip between elemental and nodal stress results, but what do those results mean, and how should you select one method over another? Understanding how Simcenter Nastran reports stress can help us interpret stress results better during post-processing.

Recent News

Siemens PLM Software Becomes Siemens Digital Industries Software

The new name is intended to reflect the depth of Siemens' software offerings across a broad spectrum of industries that can serve as the foundation for digitalization strategies at companies around the world. Read more.

Siemens Releases STAR-CCM+ 2019.3

In addition to the introduction of a new combustion model for in-cylinder simulations, this release adds the Photon-Monte-Carlo method for analyzing radiation problems, seamless co-simulation with Simcenter Nastran, and a new 3D-CAD search tool. Learn more on the Simcenter Blog or our website and attend our webinar on Dec. 12.

ATA Releases Vibrata 3.0.0 and IMAT 7.4.0

Vibrata 3.0.0 adds XY output to the Response Spectrum solver and incorporates a Vibrata-specific database format that provides 2–5x speed improvements.

IMAT 7.4.0 can now display specific displacement components in addition to the magnitude. *Readnas* adds groups to associate entity IDs with INCLUDE files, and IMAT adds support for 64-bit binary .op4 files.

Additive Manufacturing Roundup

- Siemens Acquires Atlas 3D: The cloud-based Sunata software helps designers reduce 3D printing errors caused by thermal distortion.

- Siemens Introduces AM Path Optimizer: This beta technology in NX helps additive manufacturing customers solve overheating challenges.

- Siemens Opens Additive Manufacturing Network: This cloud-based solution connects the demand for parts with a global supplier network to foster collaboration and process orchestration.

Why choose **ATA?**

ATA Engineering, Inc., (ATA) is a nationwide provider of innovative, high-value, test- and analysis-driven mechanical engineering design solutions.

With more than four decades of experience working with our customers to solve the most challenging design, test, and analysis problems, we have gained a reputation for excellence in the engineering community.

Our work on a wide range of products across a broad spread of industries has been recognized with numerous technical and service awards for excellence. This expertise and support is a key part of the added value we offer to all customers who purchase Siemens products from us, whether you are an independent contractor or a large engineering team. To provide best-in-class support to our VAR software customers, we have established a formal hotline system that provides on-demand support to resolve technical issues encountered by our customers in their implementation of the tools.

The hotline is staffed by experienced engineers, all of whom use these applications on a regular basis. ATA is also the Siemens PLM Software-preferred training provider and official developer of courseware for all Simcenter Nastran training.

ATA Technical Support

Need technical assistance? Call our hotline staffed by engineers at **877-282-4223**, or visit us online. Even if you're not a current ATA customer, try us out for free.

Free Software Trials

Visit our website to access free trials/demos of Femap and Simcenter Nastran, NX CAD and CAM, Simcenter 3D, Simcenter STAR-CCM+, Teamcenter, and Solid Edge

Featured Instructor

Sam Dyas

Sam Dyas is a project engineer in ATA's Denver office. His expertise is in dynamic analysis, specifically coupled loads analysis, where he focuses on finding efficient solutions to large-scale dynamic problems. Sam's most common tools include Simcenter Nastran, Femap, and MATLAB. In addition to project work, he supports ATA's customer hotline.

Mr. Dyas has worked on projects in many industries, but he has spent the majority of his career on aerospace applications, including payload analyses ranging from satellites to human spaceflight vehicles and nonstandard launch events such as midair extraction/ignition of launch vehicles. In addition to his typical dynamics-based work, he regularly utilizes his past experience with model correlation, FEM building, bolted joint analysis, and stress analysis to complete more complex customer requests. He also helps train ATA's new hires in the use of Femap and Simcenter Nastran.

He has a BS in Mechanical Engineering from the University of Massachusetts Lowell and an MS in Mechanical Engineering from the Colorado School of Mines.

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ATA Engineering, Inc., has been recognized as a Smart Expert Partner with validated expertise in Femap and STAR-CCM+.

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