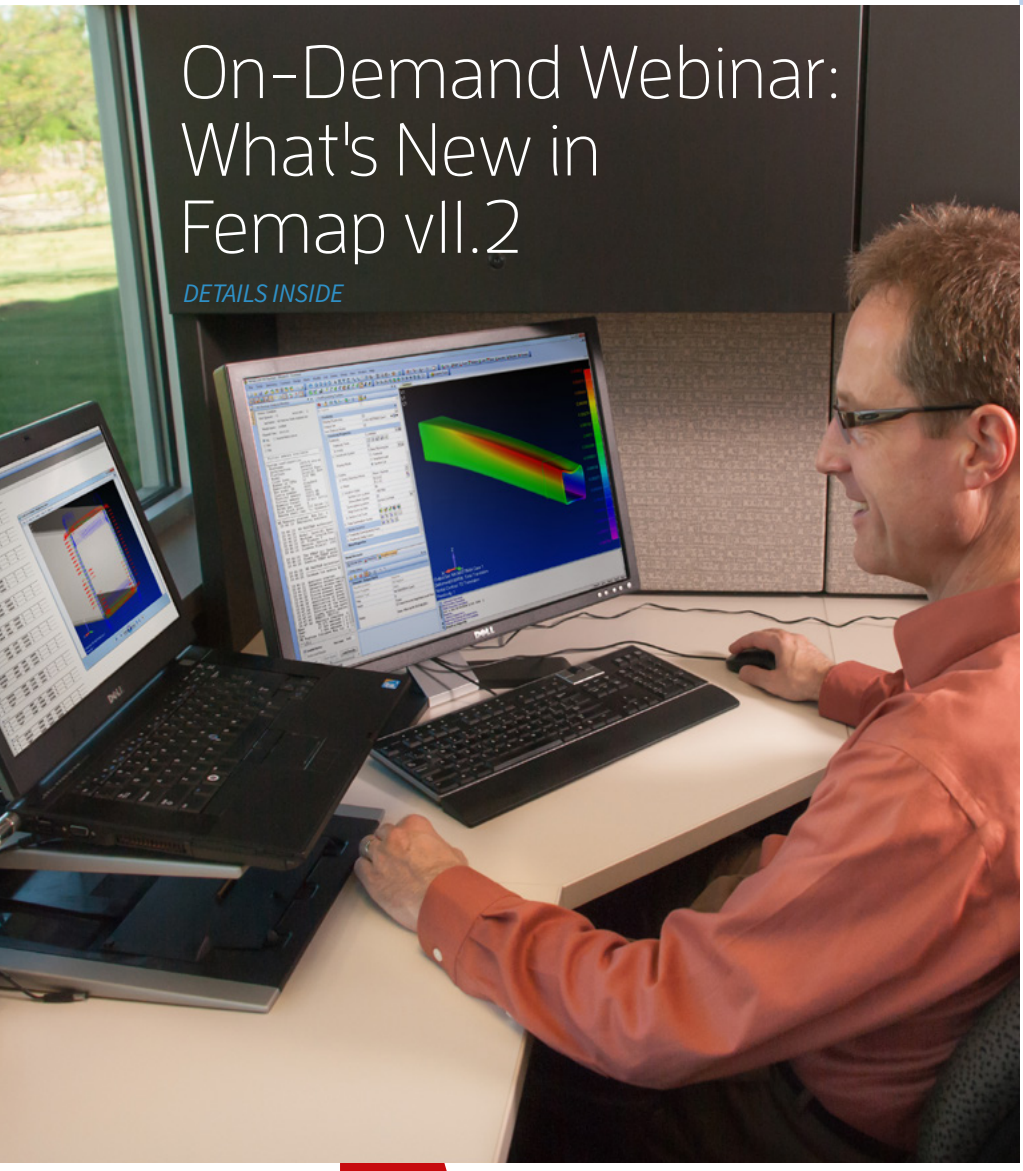
# ATA news

ISSUE TWO

SUMMER 2015

Click to Subscribe



## On-Demand Webinar: What's New in Femap v11.2

*DETAILS INSIDE*

## Technical Support Request Volume Up, Customer Feedback Positive

ATA Engineering is proud to provide un-paralleled technical support for Siemens PLM Software. With over 60 ATA engineers using the software daily, our knowledge goes far beyond the surface. Nearly 60% of support requests are answered immediately despite the volume of support requests having nearly doubled in 2015. Questions range from licensing issues to using Nastran glue in the Advanced Non-Linear module. Marvin Johnson of Johnson Technical Design in Garfield, Washington, uses ATA's technical support hotline often: "I make extensive use of the Femap API in my work. Not only does the ATA staff answer my questions, they often suggest alternative methods that are more efficient and provide code segments that they have developed internally." Try out the technical support hotline (877-282-4223) for yourself and see the ATA difference!

inside:



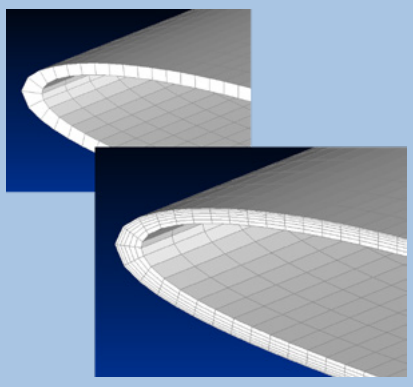

ATA ENGINEERING, INC.

www.ata-plmsoftware.com
844-756-7638 (844-PLM-SOFT)
plm_sales@ata-e.com

# On-Demand Webinar: What's New in Femap v11.2

Increase your productivity and efficiency with the new tools and enhancements in Femap v11.2, which was released in late March. This webinar demonstrates the newest features and enhancements that will improve your FEA workflow. Femap v11.2 includes several enhancements:

- Point and Surface Editing
- Mesh Layering
- Analysis Studies
- Freebody Section Cuts



**Watch now!**

# Calendar of Events

## UPCOMING TRAINING CLASSES

ATA provides comprehensive training in the use of Femap, NX, and NX Nastran. Upcoming training classes and webinars are shown below.

### FEMAP CLASSES

OCT 6 **Introduction to Femap**

OCT 20 **Advanced Femap**

### NX NASTRAN WITH FEMAP CLASSES

AUG 3 **NX Nastran Introduction to Finite Element Analysis**

AUG 10 **NX Nastran Superelement Analysis**

AUG 12 **NX Nastran Design Sensitivity and Optimization**

SEP 14 **NX Nastran Introduction to Dynamic Analysis**

SEP 17 **NX Nastran Advanced Dynamic Analysis**

### NX NASTRAN WITH NX CAE CLASSES

AUG 3 **NX Nastran Introduction to Finite Element Analysis**

AUG 10 **NX Nastran Superelement Analysis**

AUG 12 **NX Nastran Design Sensitivity and Optimization**

SEP 14 **NX Nastran Introduction to Dynamic Analysis**

SEP 17 **NX Nastran Advanced Dynamic Analysis**

SEP 21 **NX Nastran Response Simulation**

## UPCOMING WEBINARS

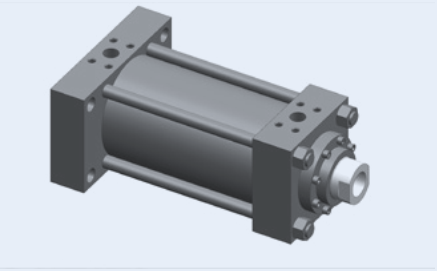
AUG 11 **Best Practices and Techniques for NX Patterning**

Repeating elements appear in structures in almost every industry. NX's pattern operations provide tremendous power and flexibility to generate such patterns. However, not only are there several distinct pattern commands, there is a multitude of setting for each command. The right understanding of these commands and settings helps designers create patterns efficiently. Click here to register.

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

# Tips and Tricks

## FEMAP: KEYBOARD SHORTCUTS



Keyboard shortcuts can be used to change the Pick method of a selection:

Shift+Drag = Box Select

Ctrl+Drag = Circle Select

Ctrl+Shift+Drag = Polygon Select

Any command can be made into a keyboard shortcut by browsing to Tools > Toolbars > Customize and clicking on the Keyboard tab.

## NASTRAN: RUN NASTRAN FROM DESKTOP

NX Nastran can be run from the desktop by running the executable in your installation folder. Depending on your license, you will find the executables in

..\FEMAPv11.2.1\nastran\bin\

or

..\NXNastran\nxnl0p1\bin\

The executable will prompt you for a qualifying input file and any Nastran keywords. You can also use the command prompt to open these executables.

## NX: SPLIT BODY WITH N-SIDED SURFACE

A body can be split into multiple parts by using the Split Body command. A nonplanar or n-sided surface can be created from a sketch or part edges and used in the Split Body command. This gives you the flexibility to divide a body along any curve or sketch as needed.

# New Resources

### Femap API Program: Write Groups to Nastran Include Files

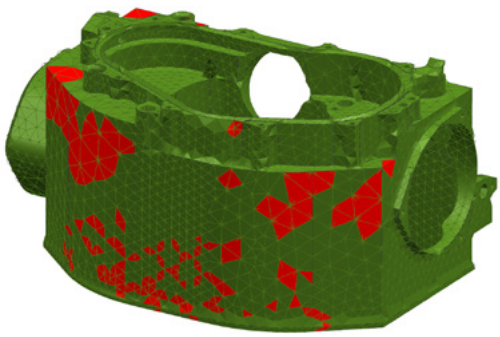
Nastran input decks contain information about every entity in a model. This leads to very large input files that are often difficult to work with. The Include statement in Nastran allows multiple bulk data files to be called from the Nastran input deck. This API allows you to export these Include files from specified groups in your Femap model.

### NX White Paper: Basic FEM Checks in NX

Finite element model (FEM) checks are an important part of finite element analysis. They reduce the chance for incorrect results and improve project efficiency by reducing solution errors. Model checks include, but are not limited to, mass/CG checks, physical property/ material checks, element quality checks, grounding, stiffness, and applied load/reaction force balance. This document explains basic techniques for checking a model at each step of the modeling process in NX.

### Nastran White Paper: Versions of NX Nastran Executable

Every version of Nastran has two different varieties— the LP and ILP—which determine how much memory can be allocated to the Nastran executable. Being able to identify the version you are using and switch between versions can be important because the ILP version may be required to solve some large models. Using the incorrect version of Nastran can result in a "Memory Request Exceeds LP-64 Limit of 2047 MW" error message.



# Recent News

## ATA Reaffirms Support to UCSD

Since 2001 , ATA Engineering has been annually sponsoring the senior "capstone" design project of UCSD's Mechanical and Aerospace Department. This is one of the many collaborations ATA Engineering has with UCSD. Read more here.

## ATA Engineering Celebrates 15th Year

April of 2015 marks ATA's 15th anniversary as a provider of engineering services in product design, analysis, and test. ATA has also been the premier value-added reseller of simulation and analysis software from Siemens PLM Software for 8 years. Read more here.

## Siemens Releases Femap v11.2.1

Siemens recently released Femap v11.2.1, a maintenance release which included several fixes and enhancements. The most notable of these was the correction of a discrepancy involving CBUSH elements when importing pre-version 11.2 models, which arose following the addition of optional element-based coordinate systems. Version 11.2.1 is available from the Siemens GTAC download center and uses the same license as Femap 11.2. Please contact ATA if you need any assistance updating your license files or software.

## Composite Modeling Techniques in NX Nastran Compared

In June 2014, ATA engineers Allison Hutchings and Michael Palodichuk presented "Comparison of Composite Modeling Techniques" at the 2014 PLM Connection Conference. This presentation reviewed typical composite modeling techniques and compared the results of these techniques when subject to standard ASTM test cases. Specific modeling techniques were also recommended for various output types. Read more here.

# 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 three 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 of 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 a number of 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 NX 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 and compare us to your current support provider.

ATA ENGINEERING, INC.

Solution Partner
PLM
SIEMENS

## Featured Instructor

Michael Yang, Ph.D.

Mike Yang's technical expertise lies in applying advanced computer-aided engineering tools to the dynamic analysis of complex aerospace structures. Dr. Yang is a senior project engineer and leader of the vibroacoustics technical working group.

Dr. Yang has performed stress, dynamic, and vibroacoustic analysis and model correlation and development for a variety of projects, including launch vehicles, payloads, satellites, optical telescopes, and aircraft. In addition to experience with model development, correlation, and analysis, Dr. Yang is experienced with class development and teaching, including NX Nastran for coupled fluid-structural analysis and general vibroacoustics.

Dr. Yang is one of the many skilled instructors teaching ATA classes.

www.ata-e.com
ata-engineering
@ataengineering
sales@ata-e.com
858.480.2000