

# ATA news

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ISSUE ONE



SPRING 2015

## ATA Engineering Hosts Introduction to Femap Course

*DETAILS INSIDE*

## ATA Releases New Siemens Software Website

ATA Engineering is proud to announce the release of [www.ata-plmsoftware.com](http://www.ata-plmsoftware.com). This new website is your single source for all Siemens Software content including training courses, technical brochures, free high-value content, and software support. As a Siemens value-added reseller (VAR), ATA Engineering prides itself on unparalleled technical support, which includes a phone hotline and online support. The software website also includes free technical resources including white papers, tutorials, and videos on Femap, NX, NX Nastran, and more. Check out [ATA Engineering's new Siemens VAR website](#) and see how we can help.

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[www.ata-plmsoftware.com](http://www.ata-plmsoftware.com)  
844-756-7638 (844-PLM-SOFT)  
[plm\\_sales@ata-e.com](mailto:plm_sales@ata-e.com)

# Introduction to Femap

April 8-10, San Diego

The Introduction to Femap course provides the engineer new to Femap with a broad introduction to the software and its organization, core strengths, and easy-to-use tools. For the engineer who already is using Femap, this course will increase Femap efficiency, fill in the grey areas, and create a solid foundation on their way to becoming a Femap expert.



[Register 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

**APR 8** [Introduction to Femap](#)

**APR 28** [Advanced Femap](#)

#### FEMAP WITH NX NASTRAN CLASSES

**APR 13** [NX Nastran Introduction to Finite Element Analysis](#)

**APR 20** [NX Nastran Response Simulation](#)

**MAY 11** [NX Nastran Advanced Dynamic Analysis](#)

**MAY 13** [NX Nastran Aeroelastic Analysis](#)

**MAY 14** [NX Nastran Introduction to DMAP](#)

**JUN 15** [NX Nastran Introduction to Dynamic Analysis](#)

#### NASTRAN WITH NX CAE CLASSES

**APR 13** [NX Nastran Introduction to Finite Element Analysis](#)

**MAY 11** [NX Nastran Advanced Dynamic Analysis](#)

**JUN 15** [NX Nastran Introduction to Dynamic Analysis](#)

### UPCOMING WEBINARS

**APR 15** [Introduction to the Femap API](#)

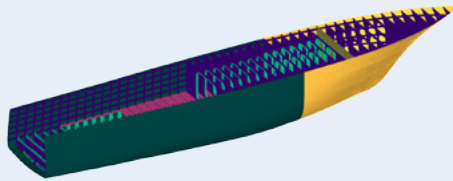
Out of the box, Femap functionality fits 95% of users 95% of the time. The Femap API tailors Femap to meet every user's needs while providing the flexibility to automate both routine and complex tasks. The Femap API allows users to customize and combine existing Femap tools for their specific workflow. Attend this webinar to learn about the Femap API, see APIs that ATA has created, and learn how to get started.

ATA also provides a host of [free training resources](#) including tutorials, videos, and whitepapers.

# Tips and Tricks

## FEMAP: GET STARTED WITH THE FEMAP API

A great place to learn about the Femap API is [a recent presentation](#) from the Femap Symposium. This presentation highlights a few APIs that ATA has created. These can be accessed from the [Free Resources](#) section of our website. Another great resource is the [Femap Community Page](#), an online forum for all Femap users.



## NASTRAN: SPEED UP RUNS

When submitting a Nastran run, prescribing memory to the "smem" keyword tells Nastran to use RAM when writing SCRATCH and SCR300 files. The "smem" keyword can improve performance by using RAM for IO on these files if you have sufficient RAM available and are careful to give enough memory to "mem". More information on Nastran performance was recently presented at the 2014 CAE Symposium. The presentation is available [here](#).

## NX: QUICKLY SHOW ENTITIES IN ASSEMBLIES

The shortcut Ctrl+B hides selected entities in your model. Use Ctrl+Shift+B to invert what's hidden and shown. The shortcut Ctrl+Shift+U shows everything in your model.

# New Resources

## [Nastran White Paper: Configuring Nastran Using the RC file](#)

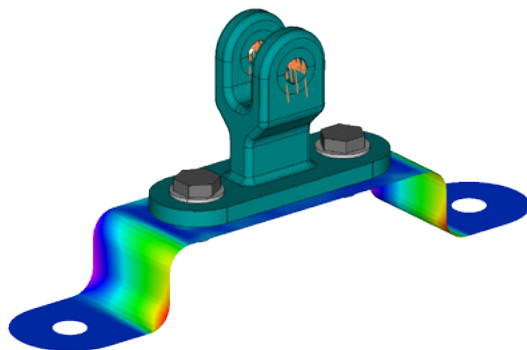
Many behaviors and default settings are set during the Nastran installation. Those settings can have considerable impact on the performance of Nastran. It is important to know how Nastran is configured and how to change it if necessary. The Nastran configuration is governed by the Runtime Configuration file, or RC file. This document explains the workings of an RC file and how to customize a Nastran configuration.

## [Femap Video Series: Analyzing a Bracket Assembly](#)

Beginning with CAD geometry, Femap is used to simplify, prepare, and mesh the geometry using an array of powerful geometry and meshing tools. Connections are created between assembly components using the Femap API and Nastran Glue. After load and constraints are applied, results are viewed in a variety of ways using the Femap Post-Processing Toolbox. Novice to experienced Femap users will benefit from the detailed discussion in the bracket assembly video series.

## [Femap API: Freebody Loads for Multiple Sets to Excel](#)

Femap's Freebody tool is very useful for investigating section loads in a model. However, it is limited to looking at one section cut for one load case at a time. This API allows multiple section cuts and load cases to be analyzed at once and will export the results to Excel.



# Recent News

## ATA Hosts Femap Symposia

In February and March 2015, ATA cohosted multiple Femap Symposia with the Femap Development Team. Attendees learned about new features in Femap 11.2, the Femap API, and meshing in Femap. [Read more here](#).

## Siemens Releases Femap 11.2

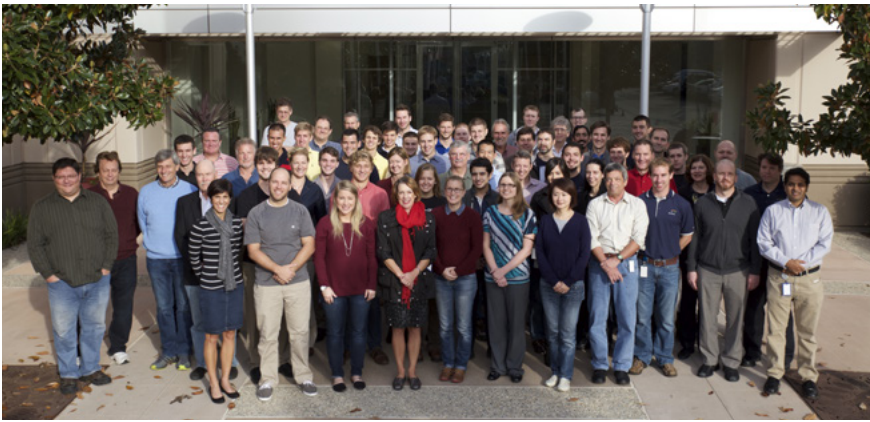
Siemens PLM Software has released Femap 11.2. Some new features include analysis studies and free body section cuts. Enhancements to geometry modification, preprocessing, and meshing are also included. [Read more here](#).

## New Versions of NX and NX Nastran Released

Siemens released NX 10 and NX Nastran 10 in December 2014. NX 10 adds tools to improve and speed up early design and concept phases. NX Nastran 10 provides a new multiphysics solution sequence and improves computational performance by supporting GPU computing. [Read more here](#).

## Simple Performance Tips Speed Up NX Nastran Simulation

In October 2014, Dr. Paul Blelloch from ATA Engineering presented the topic "Optimizing NX Nastran Performance on an HPC Cluster" at the 2014 NX CAE Symposium. This presentation not only offers insight into effective use of NX Nastran HPC computing but also has some great performance tips that can be used with any Nastran license. Topics include efficiency in scratch memory usage and improving performance on solid element static runs. [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.

## Featured Instructor

Alexander Sprunt, Ph.D.



Alexander Sprunt's technical expertise is in the application of static and dynamic analysis to the design, analysis, and testing of highly engineered products, particularly optical systems.

Dr. Sprunt is a senior project engineer with the Aerospace Analysis group, where he has worked on a variety of analysis, test, and systems engineering projects in the aerospace industry. Those projects have included prediction, measurement, and requirements development for a wide variety of static and dynamic responses of spacecraft, instruments, vibration isolators, and optical systems to meet strict performance requirements. In the course of this work, he has used Nastran, Matlab, IMAT, Femap, git, and I-deas extensively.

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

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Corporate Headquarters

13290 Evening Creek Drive S, Suite 250, San Diego, California 92128

Los Angeles Regional Office

1960 East Grand Avenue, Suite 560, El Segundo, California 90245

Northwestern Regional Office

1026 Lancaster Way SE, Sammamish, Washington 98075

Rocky Mountain Regional Office

1687 Cole Boulevard, Suite 125, Golden, Colorado 80401

Southeastern Regional Office

1500 Perimeter Parkway NW, Suite 285, Huntsville, Alabama 35806

Eastern Regional Office

13921 Park Center Road, Suite 340, Herndon, Virginia 20171

[www.ata-plmsoftware.com](http://www.ata-plmsoftware.com)

Phone 858.480.2000

Phone 424.277.5689

Phone 425.677.2200

Phone 303.945.2375

Phone 256.850.3850

Phone 703.225.7434