

#### **OVERVIEW OF SERVICES**

# **MISSION STATEMENT**

The mission of FEA Services LLC (FEAS) is to bring impeccable FEA and Engineering expertise to companies that design and produce mechanical structures and assemblies. These small to medium sized companies are poised to take the next step in utilizing FEA and other CAE technologies to improve their design to market times or reach higher levels of product optimization.

### **SERVICE SUMMARY**

- Direct FE Analysis Support
- FEA Development
- FEA Start-up Consulting
- FEA Software Sales: Simulia ABAQUS
- FEA Training
- Fatigue Test Optimization

FEA SERVICES LLC ©

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WWW.FEASERVICES.NET

AN OFFICIAL DASSAULT SYSTEMES VALUE ADDED PARTNER





#### DIRECT FE ANALYSIS and FEA DEVELOPMENT

### **DIRECT FE ANALYSIS SUPPORT**

- Analysis with highly non-Linear Material/Applications
- Analysis with Composite Material
- Complex Contacts and Assemblies
- Analytic Fatigue Assessment and Real Forensics
- Thermal-Mechanical or Explicit Dynamic-Structural Multi-Physics
- Impact or Crash Analysis
- Design and Product Optimization
- Basic Linear Structural or Dynamic Response

## FEA DEVELOPMENT

FEA Development involves an assessment of the application intent followed by a determination of the most optimal approach in utilizing FE methods to help meet those requirements from the analytic perspective.



#### FEA START-UP CONSULTING and SOFTWARE SALES

### **FEA START-UP CONSULTING**

Of course, many clients are bringing FEA expertise in-house. The question of what the optimal path is to achieve maximum ROI will need to be answered. Given our many years of experience within various industries and with the various PLM and CAE programs and functionalities that are on the market, we are an excellent resource to use to help determine the best path to take.

Ultimately, depending on the size of your company and its PLM and CAE investment potential, the level of required interoperability between the CAE functions for the most robust PLM system will not be a "one size fits all" solution. We are poised to help you make the most optimal choices for a CAE and PLM ramp-up.

#### FEA SOFTWARE SALES

Being one of very few trusted Dassault Systèmes Simulia Value Added Partners with expertise in Engineering and the Abaqus FEA software, we are pleased to offer the Abaqus FEA solution to bring you this best-in-class nonlinear FEA package in house.



#### **FEATRAINING**

# **BASIC FEA 101**

We discuss with the student group the most pertinent academic and real world relationships to FEA and work through focused sessions with one of the modern FEA processors for hands-on skill set training. This can be done live or through a "webEX" format. This is ideal for Engineers who are starting the FEA process and need to start using the tools or for students. The only pre-requisite is a sound Mechanical Engineering background.

We also offer one or two days free of our "Fast-Track to Abaqus" class to get you up and running with your new purchase of the Abaqus FEA solution.

### **CUSTOM FEA TRAINING**

Custom training tackles higher-end more specific FEA training needs. After we review a specific set of requirements surrounding a client FE application we formulate a custom class to answer these specific concerns in a training type format including relevant documentation for the client to keep. A typical process flow for this is for FEA Services LLC to take on a project then follow up by generating a custom class showing the client the steps needed to perform that work in the future.

We also offer customized FEA training as a part of our ABAQUS software sales package.



#### REAL WORLD HARDWARE

## **FATIGUE TEST OPTIMIZATION**

Our unique combination of real world experience with fatigue analysis combined with analytical (FEA) methods can be leveraged in your company to reduce test equipment and time devoted to "proving" fatigue durability for each production run, or development samples.

The result will be that instead of running samples through millions of loading cycles, we can help you prove to your customers that only 10 to 100 thousand load cycles will prove durability for the product. (1% to %10 test bench time) This is a real cost-savings potential of using FEA combined with fatigue knowledge and the proper software solutions.

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